

## STRUCTURE SEARCH

=> fil reg; d stat que l10

FILE 'REGISTRY' ENTERED AT 10:11:09 ON 06 MAR 2007

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2007 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 5 MAR 2007 HIGHEST RN 924962-30-1

DICTIONARY FILE UPDATES: 5 MAR 2007 HIGHEST RN 924962-30-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

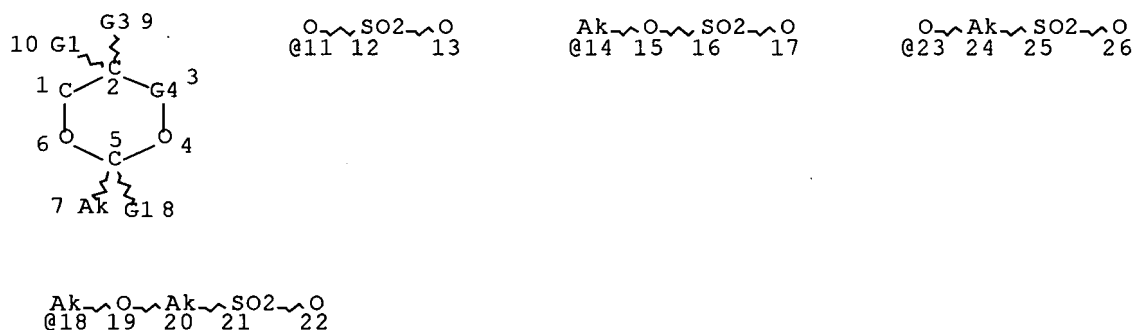
Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

L7

STR



VAR G1=H/ME/ET/N-PR/N-BU

VAR G3=11/14/18/23

REP G4=(0-2) C

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 7

CONNECT IS E2 RC AT 14

CONNECT IS E2 RC AT 18

CONNECT IS E2 RC AT 20

CONNECT IS E2 RC AT 24

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 26

STEREO ATTRIBUTES: NONE

L10 134 SEA FILE=REGISTRY SSS FUL L7

100.0% PROCESSED 18268 ITERATIONS

134 ANSWERS

SEARCH TIME: 00.00.01

## INVENTOR SEARCH

=> fil capl; d que nos l16  
 FILE 'CAPLUS' ENTERED AT 10:11:24 ON 06 MAR 2007  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
 COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 6 Mar 2007 VOL 146 ISS 11  
 FILE LAST UPDATED: 5 Mar 2007 (20070305/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>  
 'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

L7 STR  
 L10 134 SEA FILE=REGISTRY SSS FUL L7  
 L11 81 SEA FILE=CAPLUS ABB=ON MALLET C?/AU  
 L12 2447 SEA FILE=CAPLUS ABB=ON RUSSELL R?/AU  
 L13 20 SEA FILE=CAPLUS ABB=ON YARDLEY K?/AU  
 L15 47 SEA FILE=CAPLUS ABB=ON L10  
 L16 1 SEA FILE=CAPLUS ABB=ON (L11 OR L12 OR L13) AND L15

=> => d que l22  
 L11 81 SEA FILE=CAPLUS ABB=ON MALLET C?/AU  
 L12 2447 SEA FILE=CAPLUS ABB=ON RUSSELL R?/AU  
 L13 20 SEA FILE=CAPLUS ABB=ON YARDLEY K?/AU  
 L17 40 SEA FILE=CAPLUS ABB=ON RUSSEL R?/AU  
 L21 125966 SEA FILE=CAPLUS ABB=ON SURFACTANTS/CT  
 L22 3 SEA FILE=CAPLUS ABB=ON (L11 OR L12 OR L17 OR L13) AND L21

=> s l16,l22  
 L23 3 (L16 OR L22)

=> s l23 or (l23 and l15)  
 L24 3 L23 OR (L23 AND L15)

=> d ibib ed abs hitstr 1-3

L24 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2004:100785 CAPLUS Full-text  
 DOCUMENT NUMBER: 140:169766  
 TITLE: Surfactants for enhancing skin conduction and transport systems

INVENTOR(S): Robinson, Dale L.; Browning, James D.; McGinniss, Vincent; Risser, Steven M.; **Russell, Robert E.**; Boyd, Robert R.; Fleming, Matthew S.  
 PATENT ASSIGNEE(S): Battelle Memorial Institute, USA  
 SOURCE: U.S. Pat. Appl. Publ., 19 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004023849	A1	20040205	US 2003-608579	20030627
US 7099713	B2	20060829		

PRIORITY APPLN. INFO.: US 2002-393036P P 20020628

ED Entered STN: 08 Feb 2004

AB Disclosed are surfactants useful for enhancing the elec. conduction of electrodes attached to the surface of a patient. The surfactants are also useful in transport of materials in and out of the body of a patient (animal or human) and in the measurement of disease states. Typical surfactants particularly useful in the invention are broadly represented by protein/fatty acid-based compds. The protein/fatty acid compds. may be lipopolypeptides. In some embodiments the lipopolypeptides may be acyl peptides. Typical acyl peptides are Lamepon S, MayTein C, and MayTein CT. Also claimed is an electrode for electrosurgery in a patient comprising: (1) a conductor and (2) a conduction-enhancing amount of a mixture of a carrier and the surfactant to applied to a surface of the conductor.

REFERENCE COUNT: 65 THERE ARE 65 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:972310 CAPLUS Full-text

DOCUMENT NUMBER: 140:17749

TITLE: Destructible surfactants and use in small molecule analysis

INVENTOR(S): **Mallet, Claude; Russel, Reb J., II**  
**; Yardley, Kurt**

PATENT ASSIGNEE(S): Waters Investments Limited, USA

SOURCE: PCT Int. Appl., 45 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003102536	A2	20031211	WO 2003-US16819	20030530
WO 2003102536	A3	20040902		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003234681	A1	20031219	AU 2003-234681	20030530
US 2006094000	A1	20060504	US 2005-516419	20050829
PRIORITY APPLN. INFO.:			US 2002-385018P	P 20020531
			WO 2003-US16819	W 20030530

OTHER SOURCE(S): MARPAT 140:17749

ED Entered STN: 14 Dec 2003

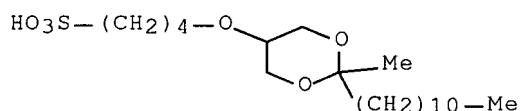
AB The anionic surfactants have a dioxolane or dioxane functional group that enable degradation of the surfactant under acidic conditions. Using the anionic surfactants in a variety of anal. applications relates to samples containing small mols.

IT **308818-10-2P 308818-11-3P**

RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(surfactant; anionic surfactants used in small mol. detection)

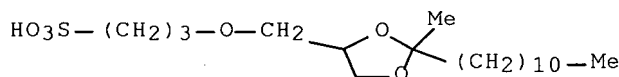
RN 308818-10-2 CAPLUS

CN 1-Butanesulfonic acid, 4-[(2-methyl-2-undecyl-1,3-dioxan-5-yl)oxy]- (9CI)  
(CA INDEX NAME)



RN 308818-11-3 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]- (9CI) (CA INDEX NAME)

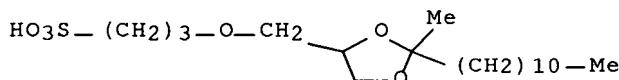
IT **308818-13-5P**

RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(surfactant; anionic surfactants used in small mol. detection)

RN 308818-13-5 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

L24 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2003:633944 CAPLUS Full-text

DOCUMENT NUMBER: 139:178829  
 TITLE: Degradation of hydrophobic ester pesticides and toxins using mutated insect carboxyl esterases  
 INVENTOR(S): **Russell, Robyn Joyce**; Heidari, Rama;  
 Devonshire, Alan; Dorrian, Susan Jane; Oakeshott, John Graham  
 PATENT ASSIGNEE(S): Commonwealth Scientific and Industrial Research Organisation, Australia  
 SOURCE: PCT Int. Appl., 66 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003066874	A1	20030814	WO 2002-AU114	20020206
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2475095	A1	20030814	CA 2002-2475095	20020206
AU 2002227797	A1	20030902	AU 2002-227797	20020206
EP 1478761	A1	20041124	EP 2002-709912	20020206
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
GB 2403221	A	20041229	GB 2004-19754	20020206
GB 2403221	B	20051207		
CN 1617932	A	20050518	CN 2002-827890	20020206
JP 2005516624	T	20050609	JP 2003-566222	20020206
US 2005176117	A1	20050811	US 2003-503643	20020206
NZ 534568	A	20060929	NZ 2002-534568	20020206
IN 2004KN01135	A	20060512	IN 2004-KN1135	20040809
HK 1067152	A1	20060210	HK 2005-100505	20050119
PRIORITY APPLN. INFO.:			WO 2002-AU114	W 20020206

ED Entered STN: 15 Aug 2003

AB The present invention relates to methods and enzymes for degrading hydrophobic ester pesticides and toxins. In particular, the present invention relates to the use of insect esterases, and mutants thereof, in the bioremediation of hydrophobic ester pesticides and toxins residues, such as pyrethroid residues, contaminating the environment and horticultural commodities.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

## REFERENCES FOR STRUCTURE SEARCH

=> fil capl; d que nos 119  
 FILE 'CAPLUS' ENTERED AT 10:12:43 ON 06 MAR 2007  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
 COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 6 Mar 2007 VOL 146 ISS 11  
 FILE LAST UPDATED: 5 Mar 2007 (20070305/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>  
 'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

L7 STR  
 L10 134 SEA FILE=REGISTRY SSS FUL L7  
 L15 47 SEA FILE=CAPLUS ABB=ON L10  
 L19 36 SEA FILE=CAPLUS ABB=ON L15 AND (PY<2003 OR PRY<2003 OR AY<2003)

=> s 119 not 124  
 L25 35 L19 NOT L24

=> d ibib ed abs hitstr 1-35; fil hom

L25 ANSWER 1 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2003:972250 CAPLUS Full-text  
 DOCUMENT NUMBER: 140:25191  
 TITLE: Destructible surfactants and uses thereof  
 INVENTOR(S): Bouvier, Edouard S. P.; Copton, Bruce John; Gebler, John C.; Gilar, Martin; Yu, Ying-Qing; Lee, Peter Jeng Jong; Brown, Elizabeth K.  
 PATENT ASSIGNEE(S): Waters Investments Limited, USA  
 SOURCE: PCT Int. Appl., 60 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003102225	A1	20031211	WO 2003-US16820	20030530 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,  
 PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,  
 TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
 FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003234682 A1 20031219 AU 2003-234682 20030530 <--

US 2006057659 A1 20060316 US 2005-516418 20050513 <--

PRIORITY APPLN. INFO.:

US 2002-385021P P 20020531 <--

WO 2003-US16820 W 20030530

ED Entered STN: 14 Dec 2003

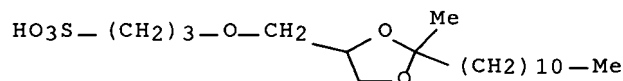
AB The present invention provides methods for enhancing chemical reactions of mols., e.g., biomols., with destructible surfactants. The chemical reactions may involve and/or be associate with anal., e.g., solubilizing, separating, purifying and/or characterizing the mols. In one aspect, the anionic surfactants of the present invention may be selectively broken up at relatively low pH. The resulting breakdown products of the surfactants may be removed from the mol./sample with relative ease. The invention has applicability in a variety of anal. techniques.

IT **308818-13-5P 308818-14-6P**

RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)  
 (destructible surfactants and uses thereof)

RN 308818-13-5 CAPLUS

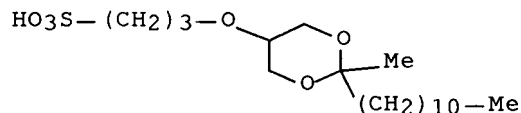
CN 1-Propanesulfonic acid, 3-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 308818-14-6 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2-methyl-2-undecyl-1,3-dioxan-5-yl)oxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

REFERENCE COUNT:

1

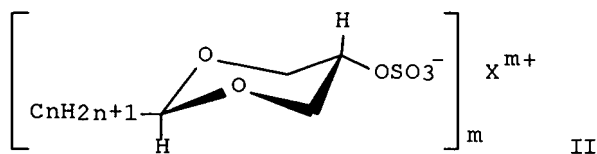
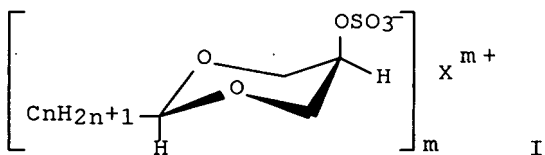
THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 2 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN



ACCESSION NUMBER: 2003:346818 CAPLUS Full-text  
 DOCUMENT NUMBER: 138:323055  
 TITLE: Manufacture of novel sulfate salts of cis- and trans-2-alkyl-5-hydroxy-1,3-dioxanes  
 INVENTOR(S): Piasecki, Andrzej; Burczyk, Bogdan; Sokolowski, Adam; Kotlewska, Urszula  
 PATENT ASSIGNEE(S): Politechnika Wroclawska, Pol.  
 SOURCE: Pol., 6 pp.  
 CODEN: POXXA7  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Polish  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PL 177120	B1	19990930	PL 1995-308929	19950602 <--
PRIORITY APPLN. INFO.:			PL 1995-308929	19950602 <--
OTHER SOURCE(S):		MARPAT 138:323055		
ED Entered STN: 08 May 2003				
GI				



AB Surface-active title salts (I and II; X = Li, K, Cs, Mg, Ca, Ba, ammonium, pyridinium; m = 1, 2; n = 7-13) were manufactured by reacting the parent cis- and/or trans-2-(C7-13-alkyl)-5-hydroxy-1,3-dioxanes with ClSO<sub>3</sub>H in CCl<sub>4</sub> in the presence of pyridine, or with SO<sub>3</sub>/pyridine complex, then removing the solvent and neutralizing the residue with aqueous alc. solution or suspension of alkali metal or alkaline earth metal hydroxide, carbonate or bicarbonate, or NH<sub>4</sub>OH. For example, adding 0.0464 mol of SO<sub>3</sub>/pyridine complex at ambient temperature in portions to a stirred solution of 0.0387 mol of a mixture of cis- and trans-2-undecyl-5-hydroxy-1,3-dioxane in 0.070 dm<sup>3</sup> CCl<sub>4</sub> and 2 + 10<sup>-3</sup> dm<sup>3</sup> pyridine, stirring the mixture for 1 h at ambient temperature and 6-8 h at .apprx.310°K gave 89% mol.% of a mixture of cis- and trans-2-undecyl-1,3-dioxane-5-sulfate pyridinium salts, m. 372-376°K and having Krafft point <293° (1% aqueous solution).

IT 512203-78-0P 512203-80-4P 512203-82-6P  
 512203-84-8P 512203-86-0P

RL: IMF (Industrial manufacture); PREP (Preparation)

(cis- and trans-isomer mixture; manufacture of novel sulfate salts of cis- and trans-alkyl(hydroxy)dioxanes)

RN 512203-78-0 CAPLUS

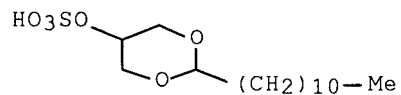
CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, compd. with pyridine (1:1)

(9CI) (CA INDEX NAME)

CM 1

CRN 512203-77-9

CMF C15 H30 O6 S



CM 2

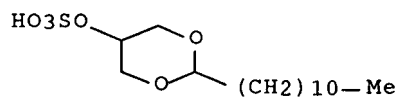
CRN 110-86-1

CMF C5 H5 N



RN 512203-80-4 CAPLUS

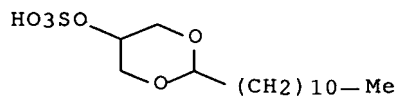
CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, calcium salt (9CI) (CA INDEX NAME)



● 1/2 Ca

RN 512203-82-6 CAPLUS

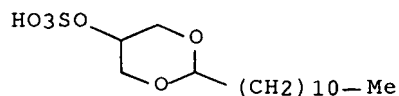
CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, magnesium salt (9CI) (CA INDEX NAME)



● 1/2 Mg

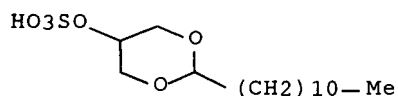
RN 512203-84-8 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, barium salt (9CI) (CA INDEX NAME)



● 1/2 Ba

RN 512203-86-0 CAPLUS  
CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, ammonium salt (9CI) (CA INDEX NAME)



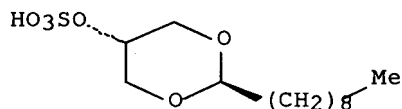
● NH3

IT 259738-92-6P 259738-94-8P 512203-89-3P  
512204-29-4P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(manufacture of novel sulfate salts of cis- and trans-alkyl(hydroxy)dioxanes)

RN 259738-92-6 CAPLUS  
CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, potassium salt, trans- (9CI)  
(CA INDEX NAME)

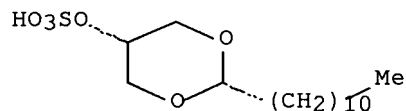
Relative stereochemistry.



● K

RN 259738-94-8 CAPLUS  
CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, potassium salt, cis- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.

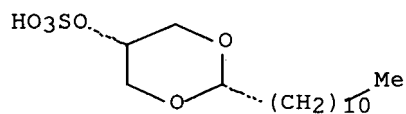


● K

RN 512203-89-3 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, lithium salt, cis- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.

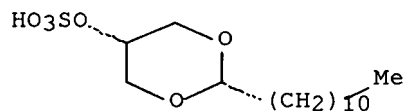


● Li

RN 512204-29-4 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, cesium salt, cis- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.



● Cs

L25 ANSWER 3 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2002:577434 CAPLUS Full-text

DOCUMENT NUMBER: 137:291147

TITLE: Identification of proteins from two-dimensional  
polyacrylamide gels using a novel acid-labile  
surfactantAUTHOR(S): Ross, Andrew R. S.; Lee, Peter J.; Smith, Duncan L.;  
Langridge, James I.; Whetton, Anthony D.; Gaskell,  
Simon J.CORPORATE SOURCE: Plant Biotechnology Institute, National Research  
Council of Canada, Saskatoon, SK, S7N 0W9, Can.

SOURCE: Proteomics (2002), 2(7), 928-936

CODEN: PROTC7; ISSN: 1615-9853

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 04 Aug 2002

AB Protein identification by peptide mass mapping usually involves digestion of gel-separated proteins with trypsin, followed by mass measurement of the resulting peptides by matrix-assisted laser desorption/ionization mass spectrometry (MALDI-MS). Pos. identification requires measurement of enough peptide masses to obtain a definitive match with sequence information recorded in protein or DNA sequence databases. However, competitive binding and ionization of residual surfactant introduced during PAGE (PAGE) can inhibit solid-phase extraction and MS anal. of tryptic peptides. We have evaluated a novel, acid-labile surfactant (ALS) as an alternative to sodium dodecylsulfate (SDS) for two-dimensional (2-D) PAGE separation and MALDI-MS mapping of proteins. ALS was substituted for SDS at the same concentration in buffers and gels used for 2-D PAGE. Manual and automated procedures for spot cutting and in-gel digestion were used to process Coomassie stained proteins for MS anal. Results indicate that substituting ALS for SDS during PAGE can significantly increase the number of peptides detected by MALDI-MS, especially for proteins of relatively low abundance. This effect is attributed to decomposition of ALS under acidic conditions during gel staining, destaining, peptide extraction and MS sample preparation. Automated excision and digestion procedures reduce contamination by keratin and other impurities, further enhancing MS identification of gel separated proteins.

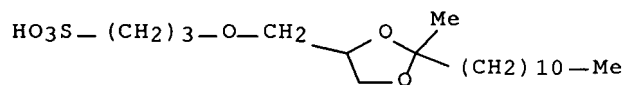
IT 308818-13-5P

RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(identification of proteins from two-dimensional polyacrylamide gels using novel acid-labile surfactant)

RN 308818-13-5 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 4 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:480012 CAPLUS Full-text

DOCUMENT NUMBER: 137:63418

TITLE: Cyclic sulfonium compounds including salacinol as glucosidase inhibitors and their preparation

INVENTOR(S): Hashimoto, Hironobu; Yuasa, Hideya; Takada, Jun

PATENT ASSIGNEE(S): Rikogaku Shinkokai, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

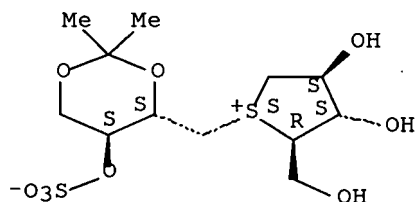
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
------------	------	------	-----------------	------

-----  
 JP 2002179673                      A            20020626            JP 2000-379453            20001213 <--  
 PRIORITY APPLN. INFO.:                      JP 2000-379453            20001213 <--  
 OTHER SOURCE(S):                      CASREACT 137:63418  
 ED    Entered STN: 26 Jun 2002  
 AB    A process for preparation of cyclic sulfonium compds., useful as glucosidase inhibitors for treatment of diabetes, comprises (1) preparation of erythritol cyclic sulfate from D- or L-glucose, (2) preparation of compds. having a cyclic structure containing 4 C atoms and 1 S atom from D-xylose, (3) coupling of the product of (1) with the product of (2), and optionally (4) deprotection of OH-protecting group. Cyclic sulfonium compds. may also prepared by treating the product of (2) with alkyl halides. Detailed reaction schemes for every step are also described. 1,4-Epithio-D-arabinitol (I), was prepared in 17% yield from D-xylose with 9 steps. 1,3-O-isopropylidene-D-erythritol cyclic sulfate (II) was prepared in 30% yield from D-glucose with 5 steps. I was reacted with II through ring opening and the coupled product was deprotected to give salacinol in 45%. I was also reacted with MeI to give its S-Me derivative iodide, which inhibited glucosidase at IC60 0.3 mM.  
 IT    **438576-21-7P**  
 RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
       (preparation of cyclic sulfonium compds. such as salacinol as glucosidase inhibitors from glucose and xylose)  
 RN    438576-21-7    CAPLUS  
 CN    D-Arabinitol, 1,4-dideoxy-1,4-[(S)-[[ (4S,5S)-2,2-dimethyl-5-(sulfooxy)-1,3-dioxan-4-yl]methyl]episulfoniumylidene]-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L25 ANSWER 5 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER:                      2002:59114 CAPLUS Full-text  
 DOCUMENT NUMBER:                      136:249430  
 TITLE:                                      Winsor-type microemulsions stabilized by mixtures of surfactants  
 AUTHOR(S):                                Zielonka, Barbara; Sokolowski, Adam  
 CORPORATE SOURCE:                      Wroclaw University of Technology, Wroclaw, Pol.  
 SOURCE:                                      World Surfactants Congress, 5th, Firenze, Italy, May 29-June 2, 2000 (2000), 852-860. Comite Europeen des Agents de Surface et leurs Intermediaires Organiques: Brussels, Belg.  
     CODEN: 69BYUW  
 DOCUMENT TYPE:                            Conference; (computer optical disk)  
 LANGUAGE:                                  English  
 ED    Entered STN: 23 Jan 2002  
 AB    We have undertaken investigations upon the behavior in Winsor microemulsion systems of surfactant mixts. Sodium n-alkyl sulfates, sulfonates, carboxylates, acetal-type surfactants and fluorinated amphiphiles-sodium

carboxylate, fluorinated sugar-type derivative were used as addnl. surface-active agents, called "second surfactants". They were added to systems containing n-heptane, water, sodium diethylhexylsulfosuccinate (AOT) and NaCl in order to obtain transition from water-in-oil microemulsions (Winsor II) to oil-in-water ones (Winsor I). From interfacial tension measurements we determined the regions where Winsor I, Winsor II, and Winsor III occur and calculated the standard free energy of transition,  $\Delta G_{tr}$ , from the Winsor I to the Winsor III system. Addnl., the  $\Delta G_{tr}$  contributions derived from all structural parts of the second surfactant mol., i.e.  $CH_2$ ,  $CF_2$ , head group, were estimated

IT 139888-69-0 139888-70-3 139888-72-5  
186189-03-7 186189-04-8 186189-05-9  
186189-06-0

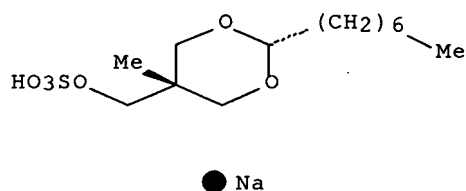
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(Winsor-type microemulsions stabilized by mixts. of surfactants)

RN 139888-69-0 CAPLUS.

CN 1,3-Dioxane-5-methanol, 2-heptyl-5-methyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

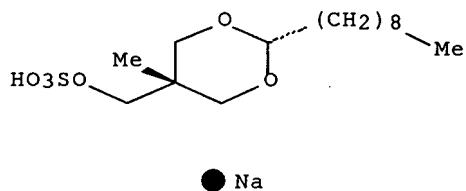
Relative stereochemistry.



RN 139888-70-3 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-nonyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

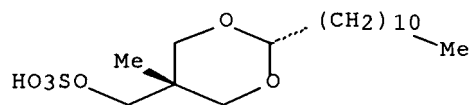
Relative stereochemistry.



RN 139888-72-5 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-undecyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.

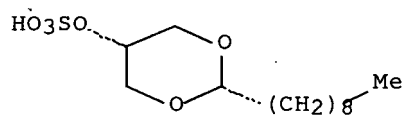


● Na

RN 186189-03-7 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.

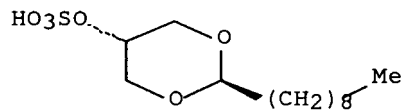


● Na

RN 186189-04-8 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.

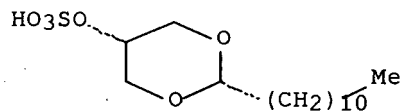


● Na

RN 186189-05-9 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.



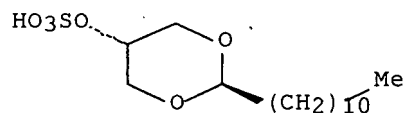
● Na

RN 186189-06-0 CAPLUS



CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, trans- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.



● Na

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 6 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:812359 CAPLUS Full-text

DOCUMENT NUMBER: 136:167579

TITLE: Synthesis of a nitrogen analogue of salacinol and its  $\alpha$ -glucosidase inhibitory activity

AUTHOR(S): Muraoka, Osamu; Ying, Shao; Yoshikai, Kazuya; Matsuura, Yoshiharu; Yamada, Eriko; Minematsu, Toshie; Tanabe, Genzoh; Matsuda, Hisashi; Yoshikawa, Masayuki  
CORPORATE SOURCE: School of Pharmaceutical Sciences, Kinki University, Osaka, 577-8502, Japan

SOURCE: Chemical & Pharmaceutical Bulletin (2001), 49(11), 1503-1505

CODEN: CPBTAL; ISSN: 0009-2363

PUBLISHER: Pharmaceutical Society of Japan

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 136:167579

ED Entered STN: 08 Nov 2001

AB A nitrogen analog of the naturally occurring sulfonium ion salacinol, a potent  $\alpha$ -glucosidase inhibitor isolated from the Ayurvedic medicine Salacia reticulata, was synthesized and its inhibitory activity against  $\alpha$ -glucosidase tested. Substitution of the sulfur atom in salacinol with a nitrogen reduced the activity considerably. The solid-state stereostructure of the related compound 1'-(1-pyrrolidiniumyl)-2',4'-O- isopropylidene-1'-deoxy-L-erythritol-3'-sulfate was determined on the basis of single crystal X-ray measurement.

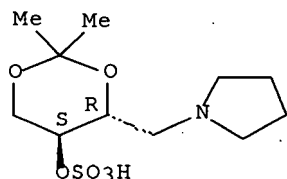
IT 396073-85-1P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(crystal structure of; synthesis of a nitrogen analog of salacinol and its  $\alpha$ -glucosidase inhibitory activity)

RN 396073-85-1 CAPLUS

CN 1,3-Dioxan-5-ol, 2,2-dimethyl-4-(1-pyrrolidinylmethyl)-, hydrogen sulfate (ester), (4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 396073-88-4P

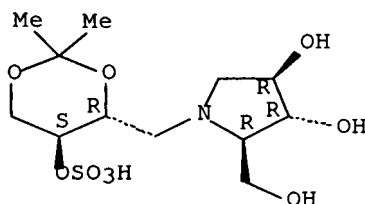
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis of a nitrogen analog of salacinol and its  $\alpha$ -glucosidase inhibitory activity)

RN 396073-88-4 CAPLUS

CN 3,4-Pyrrolidinediol, 1-[[[(4R,5S)-2,2-dimethyl-5-(sulfoxy)-1,3-dioxan-4-yl]methyl]-2-(hydroxymethyl)-, (2R,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 7 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:699311 CAPLUS Full-text

DOCUMENT NUMBER: 136:202175

TITLE: Decomposition properties of sodium 3-[(2-alkyl-1,3-dioxolan-4-yl)methoxyl]-1-propanesulfonates

AUTHOR(S): Zhu, Hong-jun; Wang, Jin-tang; Xu, Feng

CORPORATE SOURCE: School of Science, Nanjing University of Chemical Technology, Nanjing, 210009, Peop. Rep. China

SOURCE: Jingxi Huagong (2001), 18(8), 443-444, 460

CODEN: JIHUFJ; ISSN: 1003-5214

PUBLISHER: Jingxi Huagong Bianjibu

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

ED Entered STN: 26 Sep 2001

AB The decomposition properties of sodium 3-[(2-alkyl-1,3-dioxolan-4-yl)methoxyl]-1-propanesulfonates [alkyl = heptyl (HDMPS), nonyl (NDMPS), undecyl (UDMPS)] in 0.1 mol/L HCl solution (25°) were measured by gas chromatog. The kinetics investigation showed that the decomposition reaction of these surfactants is pseudo-first-order. Their rate constant  $k$  and half-life  $t_{1/2}(h)$ : HDMPS 0.638, NDMPS 0.827, UDMPS 0.936.

IT 333952-53-7 333952-54-8 333952-55-9

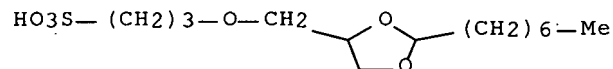
RL: PRP (Properties); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)

(decomposition properties of sodium 3-[(2-alkyl-1,3-dioxolan-4-yl)methoxyl]-

1-propanesulfonates as anionic surfactants)

RN 333952-53-7 CAPLUS

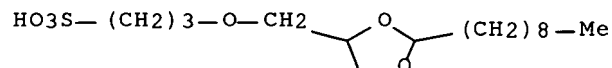
CN 1-Propanesulfonic acid, 3-[(2-heptyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 333952-54-8 CAPLUS

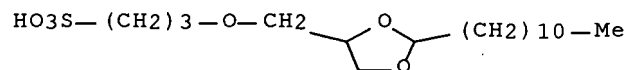
CN 1-Propanesulfonic acid, 3-[(2-nonyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 333952-55-9 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2-undecyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

L25 ANSWER 8 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:865356 CAPLUS Full-text

DOCUMENT NUMBER: 134:29655

TITLE: Method for preparation of diglycerin from diglycerin ketal of acetal derivatives

INVENTOR(S): Murata, Daiya; Imanaka, Takehiro; Nagumo, Hiroshi

PATENT ASSIGNEE(S): Kao Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

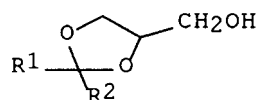
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

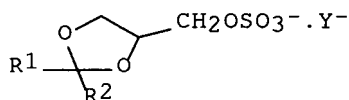
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000344705	A	20001212	JP 1999-157970	19990604 <--
PRIORITY APPLN. INFO.:			JP 1999-157970	19990604 <--

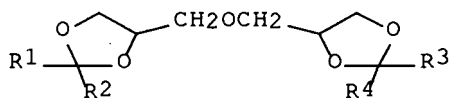
OTHER SOURCE(S): CASREACT 134:29655; MARPAT 134:29655  
 ED Entered STN: 12 Dec 2000  
 GI



I



II



III

AB Diglycerin, HOCH<sub>2</sub>CH(OH)OCH<sub>2</sub>CH(OH)CH<sub>2</sub>OH, is prepared by reaction of glycerin ketal or acetal (I; R<sub>1</sub>, R<sub>2</sub> = H, hydrocarbyl; or R<sub>1</sub> and R<sub>2</sub> are linked to each other to form a carbo cyclic ring) glycerin ketal or acetal sulfate salt (II; R<sub>3</sub>, R<sub>4</sub> = H, hydrocarbyl; or R<sub>3</sub> and R<sub>4</sub> are linked to each other to form a carbo cyclic ring; Y<sup>+</sup> = salt-forming cation) to give diglycerin ketal or acetal (III; R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> = H, hydrocarbyl; or R<sub>1</sub> and R<sub>2</sub> or R<sub>3</sub> and R<sub>4</sub> are linked to each other to form a carbo cyclic ring) followed by deacetalization or deketalization. This process gives diglycerin of high purity which is useful as food additive or an intermediate for nonionic surfactants. Thus, 116.9 g glycerin Me Et ketone ketal, 20 mL pyridine, and 500 mL CCl<sub>4</sub> were heated to 45° in a flask, followed by adding portionwise 127.3 g SO<sub>3</sub>-pyridine complex over a period of 3 h, and the resulting mixture was neutralized by adding 66.7 g 48% aqueous NaOH, 260 g H<sub>2</sub>O, and 900 g ethanol and evaporated to remove the solvent to give 219.9 g II (R<sub>3</sub> = Et, R<sub>4</sub> = Me, Y<sup>+</sup> = Na<sup>+</sup>). The latter product and 116.9 g glycerin Me Et ketone ketal were added to a flask, followed by adding 66.7 g 48% aqueous NaOH and 650 mL xylene, and the resulting mixture was refluxed for etherification with azeotropic removal of water for 16 h to give 97.9 g III (R<sub>1</sub> = R<sub>3</sub> = Et, R<sub>2</sub> = R<sub>4</sub> = Me). The latter compound (60 g) was treated with p-toluenesulfonic acid and 3-5% steam per h was introduced with removing excess steam and Me Et ketone outside the system for 5 h and the resulting mixture was dehydrated at 90° and 6.66 kPa for 0.5 to give 41.0 g diglycerin (97.9% purity).

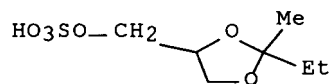
IT **311820-48-1P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of diglycerin by etherification diglycerin ketal or acetal and its sulfate and deacetalization or deketalization of diglycerin ketal or acetal)

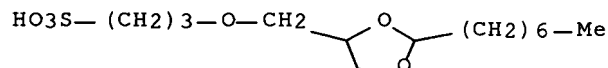
RN 311820-48-1 CAPLUS

CN 1,3-Dioxolane-4-methanol, 2-ethyl-2-methyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



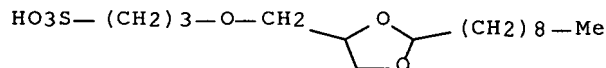
● Na

L25 ANSWER 9 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2000:835474 CAPLUS Full-text  
 DOCUMENT NUMBER: 134:297503  
 TITLE: Preparation of degradable sulfonate surfactants  
 AUTHOR(S): Zhu, Hong-jun; Wang, Jin-tang; Xu, Feng; Kong, Ai-wu  
 CORPORATE SOURCE: Department of Allied Chemistry, Nanjing University of  
 Chemical Technology, Nanjing, 210009, Peop. Rep. China  
 SOURCE: Jingxi Huagong (2000), 17(10), 559-561, 566  
 CODEN: JIHUFJ; ISSN: 1003-5214  
 PUBLISHER: Jingxi Huagong Bianjibu  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Chinese  
 ED Entered STN: 30 Nov 2000  
 AB A series of degradable sulfonate surfactants(III) {sodium 3-[(2-heptyl-1,3-dioxolan-4-yl) methoxy]-1-propanesulfonate; sodium 3-[(2-nonyl-1,3-dioxolan-4-yl) methoxy]-1-propanesulfonate; sodium 3-[(undecyl-1,3-dioxolan-4-yl) methoxy]-1-propanesulfonate) with 1,3-dioxolane ring were prepared by three steps. (a) a series of acetals (I) were prepared by reaction of aldehydes and tri-Et orthoformate at 8-10° under the catalysis of ammonium nitrate (50% yield), (b) the cyclic glycerol acetals(II) were prepared by transacetalation of I with glycerol at 110° (80% yield), (c) then the intermediates II reacted with inner ester of 3-hydroxypropanesulfonic acid and sodium hydroxide at 60-65° for 8 h to give III (90% yield). The structure identification was performed using elementary anal., IR and 1HNMR.  
 IT **333952-53-7P 333952-54-8P 333952-55-9P**  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (degradable sulfonate surfactants; preparation of)  
 RN 333952-53-7 CAPLUS  
 CN 1-Propanesulfonic acid, 3-[(2-heptyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



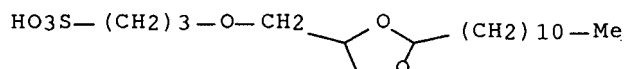
● Na

RN 333952-54-8 CAPLUS  
 CN 1-Propanesulfonic acid, 3-[(2-nonyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

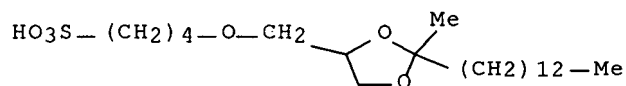
RN 333952-55-9 CAPLUS  
 CN 1-Propanesulfonic acid, 3-[(2-undecyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

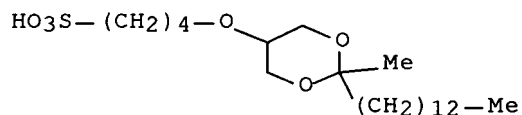
L25 ANSWER 10 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2000:824508 CAPLUS Full-text  
 DOCUMENT NUMBER: 134:2339  
 TITLE: Destructible surfactants and uses thereof  
 INVENTOR(S): Lee, Peter Jeng Jong; Compton, Bruce J.  
 PATENT ASSIGNEE(S): Waters Investments Ltd., USA  
 SOURCE: PCT Int. Appl., 50 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000070334	A1	20001123	WO 2000-US13028	20000512 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2000048435	A	20001205	AU 2000-48435	20000512 <--
EP 1181537	A1	20020227	EP 2000-930651	20000512 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
PRIORITY APPLN. INFO.:			US 1999-134113P	P 19990514 <--
			WO 2000-US13028	W 20000512 <--
OTHER SOURCE(S): MARPAT 134:2339				
ED Entered STN: 24 Nov 2000				
AB Destructible surfactants and methods of using same are provided. The invention includes anionic surfactants having a dioxolane or dioxane functional group which enables the surfactant to be broken down under acidic conditions. The invention also includes methods of making anionic surfactants and methods of using anionic surfactants in a variety of applications.				
IT <b>138487-18-0 308818-17-9</b>				
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses) (destructible surfactants and uses thereof)				
RN 138487-18-0 CAPLUS				
CN 1-Butanesulfonic acid, 4-[(2-methyl-2-tridecyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)				



● Na

RN 308818-17-9 CAPLUS

CN 1-Butanesulfonic acid, 4-[(2-methyl-2-tridecyl-1,3-dioxan-5-yl)oxy]-,  
sodium salt (9CI) (CA INDEX NAME)

● Na

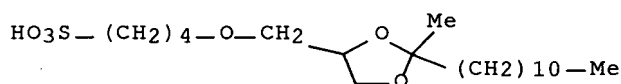
IT 138487-16-8P 308818-10-2P 308818-11-3P

308818-13-5P 308818-14-6P 308818-15-7P

RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP  
(Preparation); USES (Uses)

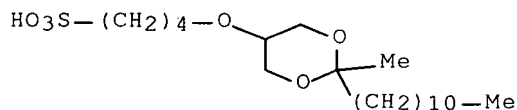
(destructible surfactants and uses thereof)

RN 138487-16-8 CAPLUS

CN 1-Butanesulfonic acid, 4-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]-,  
sodium salt (9CI) (CA INDEX NAME)

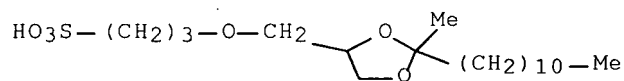
● Na

RN 308818-10-2 CAPLUS

CN 1-Butanesulfonic acid, 4-[(2-methyl-2-undecyl-1,3-dioxan-5-yl)oxy]- (9CI)  
(CA INDEX NAME)

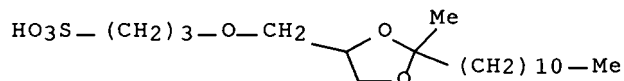
RN 308818-11-3 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]-  
(9CI) (CA INDEX NAME)



RN 308818-13-5 CAPLUS

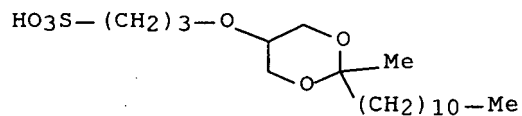
CN 1-Propanesulfonic acid, 3-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]-  
, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 308818-14-6 CAPLUS

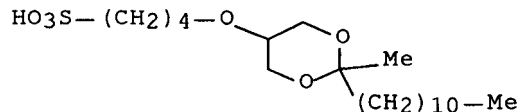
CN 1-Propanesulfonic acid, 3-[(2-methyl-2-undecyl-1,3-dioxan-5-yl)oxy]-,  
sodium salt (9CI) (CA INDEX NAME)



● Na

RN 308818-15-7 CAPLUS

CN 1-Butanesulfonic acid, 4-[(2-methyl-2-undecyl-1,3-dioxan-5-yl)oxy]-,  
sodium salt (9CI) (CA INDEX NAME)



● Na

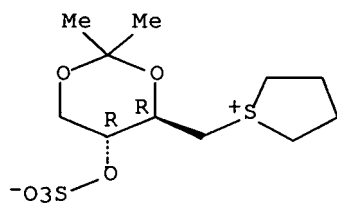
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 11 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2000:564534 CAPLUS Full-text  
DOCUMENT NUMBER: 133:310063



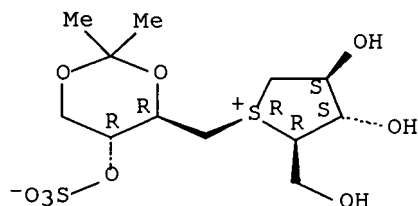
TITLE: Synthesis of salacinol  
 AUTHOR(S): Yuasa, H.; Takada, J.; Hashimoto, H.  
 CORPORATE SOURCE: Graduate School of Bioscience and Biotechnology,  
 Department of Life Science, Tokyo Institute of  
 Technology, Yokohama, 226-8501, Japan  
 SOURCE: Tetrahedron Letters (2000), 41(34),  
 6615-6618  
 CODEN: TELEAY; ISSN: 0040-4039  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 133:310063  
 ED Entered STN: 16 Aug 2000  
 AB Salacinol, a new type of  $\alpha$ -glucosidase inhibitor discovered from the  
 antidiabetic herb, *Salacia reticulata*, was synthesized for the first time.  
 Under the strategy that salacinol would be synthesized by the coupling  
 reaction between 1,4-epithio-D-arabinitol and the cyclic sulfate of an  
 erythritol derivative, the model coupling reactions between  
 tetrahydrothiophene and versatile cyclic sulfate derivs. were undertaken.  
 These expts. indicated that the 1,3-diol of the cyclic sulfate should be  
 protected with the isopropylidene group, otherwise, even the benzylidene-  
 protected cyclic sulfate decomposed during the reaction. Thus, the salacinol  
 was synthesized using the cyclic sulfate of 1,3-O-isopropylidene-D-  
 erythritol. The resulting coupling product was deisopropylidenated to afford  
 salacinol. A diastereomer of salacinol was also synthesized.  
 IT **302579-07-3P 302579-09-5P 302579-10-8P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation of salacinol by coupling of epithioarabinitol with cyclic  
 sulfate of isopropylidene-D-erythritol)  
 RN 302579-07-3 CAPLUS  
 CN Thiophenium, 1-[[[(4R,5R)-2,2-dimethyl-5-(sulfooxy)-1,3-dioxan-4-  
 yl]methyl]tetrahydro-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 302579-09-5 CAPLUS  
 CN D-Arabinitol, 1,4-dideoxy-1,4-[(R)-[[[(4R,5R)-2,2-dimethyl-5-(sulfooxy)-1,3-  
 dioxan-4-yl]methyl]episulfoniumylidene]-, inner salt (9CI) (CA INDEX  
 NAME)

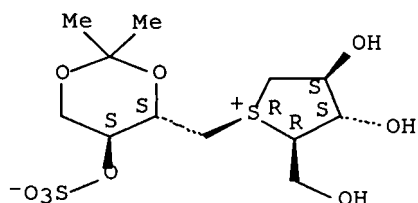
Absolute stereochemistry.



RN 302579-10-8 CAPLUS

CN D-Arabinitol, 1,4-dideoxy-1,4-[(R)-[[[(4S,5S)-2,2-dimethyl-5-(sulfooxy)-1,3-dioxan-4-yl]methyl]episulfoniumylidene]-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



6/25 2nd

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 12 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:270652 CAPLUS Full-text

DOCUMENT NUMBER: 133:336886

TITLE: Synthesis and surface properties of chemodegradable anionic surfactants: diastereomeric (2-n-alkyl-1,3-dioxan-5-yl) sulfates with monovalent counter-ions. [Erratum to document cited in CA132:196127]

AUTHOR(S): Piasecki, Andrzej; Mayhew, Alexandra

CORPORATE SOURCE: Institute of Organic and Polymer Technology, Wroclaw University of Technology, Wroclaw, 50-370, Pol.

SOURCE: Journal of Surfactants and Detergents (2000), 3(2), 237

CODEN: JSDEFL; ISSN: 1097-3958

PUBLISHER: AOCs Press

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 26 Apr 2000

AB The captions for Figs. 2 and 3 were switched; the corrected figures and their corresponding captions are given.

IT 186189-03-7P 186189-04-8P 186189-05-9P

186189-06-0P 259738-90-4P 259738-91-5P

259738-92-6P 259738-93-7P 259738-94-8P

259738-95-9P 259738-96-0P 259738-97-1P

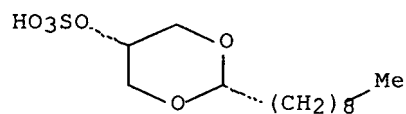
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(synthesis and surface properties of chemodegradable diastereomeric (alkyldioxanyl) sulfate anionic surfactants with monovalent counter-ions (Erratum))

RN 186189-03-7 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.

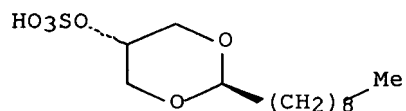


● Na

RN 186189-04-8 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.

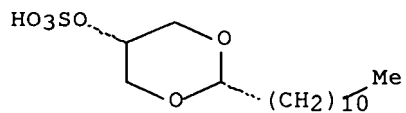


● Na

RN 186189-05-9 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.

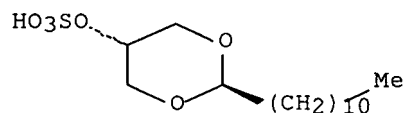


● Na

RN 186189-06-0 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.

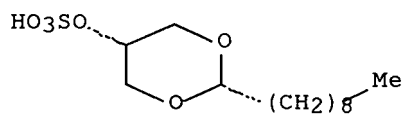


● Na

RN 259738-90-4 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, potassium salt, cis- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.

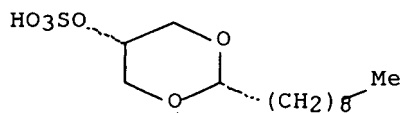


● K

RN 259738-91-5 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, ammonium salt, cis- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.

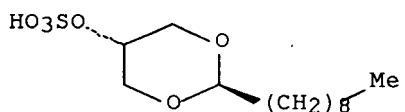


● NH3

RN 259738-92-6 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, potassium salt, trans- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.

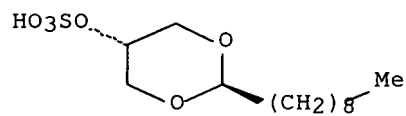


● K

RN 259738-93-7 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, ammonium salt, trans- (9CI)  
(CA INDEX NAME)

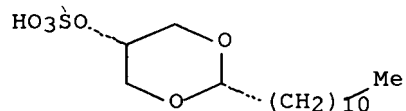
Relative stereochemistry.

● NH<sub>3</sub>

RN 259738-94-8 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, potassium salt, cis- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.

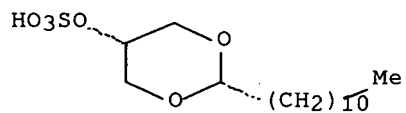


● K

RN 259738-95-9 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, ammonium salt, cis- (9CI)  
(CA INDEX NAME)

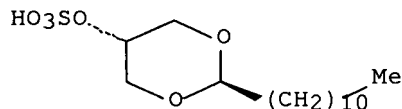
Relative stereochemistry.

● NH<sub>3</sub>

RN 259738-96-0 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, potassium salt, trans-  
(9CI) (CA INDEX NAME)

Relative stereochemistry.

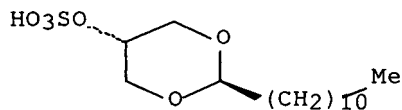


● K

RN 259738-97-1 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, ammonium salt, trans- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.



● NH3

L25 ANSWER 13 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:51525 CAPLUS Full-text

DOCUMENT NUMBER: 132:196127

TITLE: Synthesis and surface properties of chemodegradable  
anionic surfactants: diastereomeric  
(2-n-alkyl-1,3-dioxan-5-yl) sulfates with monovalent  
counter-ions

AUTHOR(S): Piasecki, Andrzej; Mayhew, Alexandra

CORPORATE SOURCE: Institute of Organic and Polymer Technology, Wrocław  
University of Technology, Wrocław, 50-370, Pol.SOURCE: Journal of Surfactants and Detergents (2000  
) , 3(1), 59-65

CODEN: JSDEFL; ISSN: 1097-3958

PUBLISHER: AOCS Press

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 23 Jan 2000

AB Sodium, potassium and ammonium cis- and trans-(2-n-alkyl-1,3-dioxan-5-yl) sulfates 6-8 (alkyl: n-C9H19, 6a-8a, and n-C11H23, 6b-8b) were synthesized in a reaction of aliphatic aldehydes 1a,b with glycerol 2 followed by separation in high yields of individual geometric isomers of cis- and trans-2-n-alkyl-5-hydroxy-1,3-dioxanes, cis-3a,b and trans-3a,b, followed by sulfation with sulfur trioxide-pyridine complex, and finally neutralization with NaOH, KOH, and NH4OH, resp. Phys. data of the compds. and some surface properties of 2-n-nonyl derivs., such as critical micelle concentration (CMC), effectiveness of aqueous surface tension reduction (ΠCMC), surface excess concentration (ΓCMC), and the surface area demand per mol. (ACMC), were determined. It was shown that the surface activity of these compds. is influenced both by their geometric structure and by the monovalent counter-ion.

IT 186189-03-7P 186189-04-8P 186189-05-9P  
186189-06-0P 259738-90-4P 259738-91-5P  
259738-92-6P 259738-93-7P 259738-94-8P

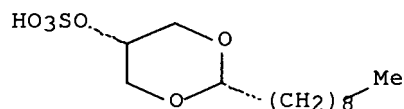
**259738-95-9P 259738-96-0P 259738-97-1P**

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (synthesis and surface properties of chemodegradable diastereomeric (alkyldioxanyl) sulfate anionic surfactants with monovalent counter-ions)

RN 186189-03-7 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.

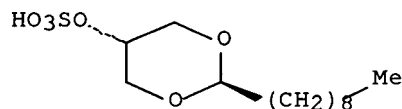


● Na

RN 186189-04-8 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, trans- (9CI)  
 (CA INDEX NAME)

Relative stereochemistry.

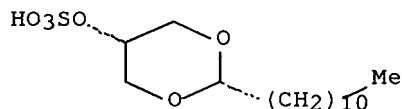


● Na

RN 186189-05-9 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, cis- (9CI)  
 (CA INDEX NAME)

Relative stereochemistry.

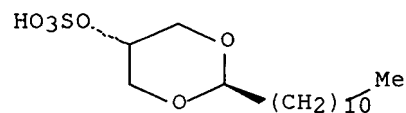


● Na

RN 186189-06-0 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, trans- (9CI)  
 (CA INDEX NAME)

Relative stereochemistry.

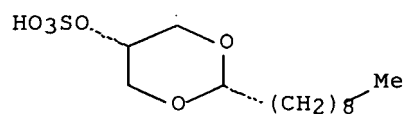


● Na

RN 259738-90-4 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, potassium salt, cis- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.

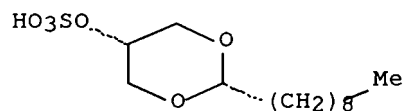


● K

RN 259738-91-5 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, ammonium salt, cis- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.

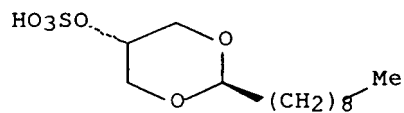


● NH3

RN 259738-92-6 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, potassium salt, trans- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.



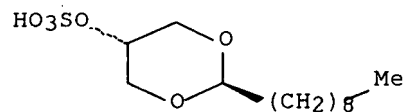
● K



RN 259738-93-7 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, ammonium salt, trans- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.

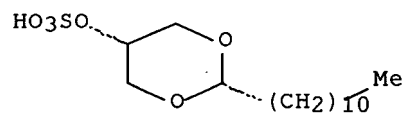


● NH<sub>3</sub>

RN 259738-94-8 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, potassium salt, cis- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.

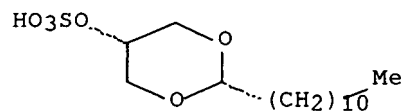


● K

RN 259738-95-9 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, ammonium salt, cis- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.

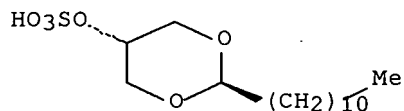


● NH<sub>3</sub>

RN 259738-96-0 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, potassium salt, trans-  
(9CI) (CA INDEX NAME)

Relative stereochemistry.

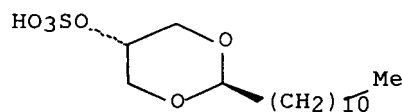


● K

RN 259738-97-1 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, ammonium salt, trans- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.



● NH3

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 14 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:774192 CAPLUS Full-text

DOCUMENT NUMBER: 132:13333

TITLE: Dioxolanes as (intermediates for) surfactants, their  
preparation, and acid decompositionINVENTOR(S): Nakamura, Masaki; Nomura, Hiroshi; Miyamoto, Masanori;  
Hasegawa, Akira

PATENT ASSIGNEE(S): Osaka City, Japan; Teshima Kaken K. K.

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

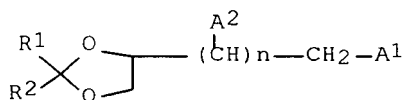
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 11335371	A	19991207	JP 1998-138241	19980520 <--
JP 3049390	B2	20000605		
PRIORITY APPLN. INFO.:			JP 1998-138241	19980520 <--
ED Entered STN: 08 Dec 1999				
GI				



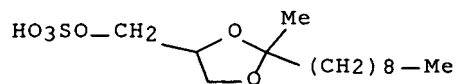
I

AB Dioxolanes I [R1 = Ra(ORb)y; Ra = C6-22 alkyl, alkenyl, alkynyl, (substituted) aryl; Rb = C2-4 alkylene; y = 0-20; R2 = Me, Et; n = 0, 1; A1, A2 = OH, OSO3M; M = H, alkali metal, alkaline earth metal, ammonium, C2-3 alkanolammonium, C1-5 alkylammonium, basic amino acid residue], which are decomposed into ketones, glycerin, erythritol, etc. by treatment with acids, are prepared by sulfation of I (n = 0, 1; A1 = A2 = OH). Thus, 2-undecanone was condensed with glycerin and sulfated to give I (R1 = nonyl, R2 = Me, n = 0, A1 = OSO3Na) (II) showing critical micelle concentration  $1.0 \times 10^{-2}$  mol/L, surface tension (at the critical micelle concentration) 39.6 mN/m, and Krafft point (1%)  $< 0^\circ$ . II was completely decomposed by 1.0 N HCl at  $25^\circ$  for 1 h.

IT **251453-51-7P**  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (preparation and acid decomposition of dioxolanes as (intermediates for) surfactants)

RN 251453-51-7 CAPLUS

CN 1,3-Dioxolane-4-methanol, 2-methyl-2-nonyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

L25 ANSWER 15 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:619226 CAPLUS Full-text

DOCUMENT NUMBER: 132:238708

TITLE: Synthesis and properties of sulfate- and polyoxyethylene-type chemodegradable surfactants bearing a 1,3-dioxolane ring

AUTHOR(S): Yamamura, Shingo; Ono, Daisuke; Nakamura, Masaki; Shizuma, Motohiro; Tamai, Toshiyuki; Takeda, Tokuji

CORPORATE SOURCE: Osaka Munic. Tech. Res. Inst., Osaka, 536-8553, Japan

SOURCE: Kagaku to Kogyo (Osaka) (1999), 73(9), 419-425

CODEN: KKGOAG; ISSN: 0368-5918

PUBLISHER: Osaka Koken Kyokai

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

ED Entered STN: 28 Sep 1999

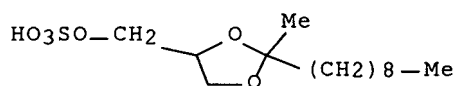
AB Chemodegradable anionic and nonionic surfactants bearing a 1,3-dioxolane ring were prepared by the acid-catalyzed condensation of ketones and glycerol, followed by sulfation or ethoxylation. These surfactants had good surface activity and detergency, and were easily hydrolyzed under acidic conditions.

IT **251453-51-7P**, (2-Methyl-2-nonyl-1,3-dioxolan-4-yl)methyl sulfate sodium salt **261963-60-4P**, (2-Methyl-2-undecyl-1,3-dioxolan-4-yl)methyl sulfate sodium salt

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

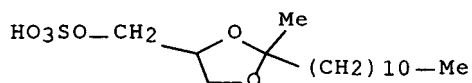
(anionic surfactant; preparation of chemodegradable surfactants bearing

dioxolane ring)  
 RN 251453-51-7 CAPLUS  
 CN 1,3-Dioxolane-4-methanol, 2-methyl-2-nonyl-, hydrogen sulfate, sodium salt  
 (9CI) (CA INDEX NAME)



● Na

RN 261963-60-4 CAPLUS  
 CN 1,3-Dioxolane-4-methanol, 2-methyl-2-undecyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

L25 ANSWER 16 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1999:371434 CAPLUS Full-text  
 DOCUMENT NUMBER: 131:134992  
 TITLE: Adsorption of Diastereomerically Pure Sodium cis- and trans-(2-n-Alkyl-1,3-dioxan-5-yl) Sulfates at the n-Heptane-Water Interface  
 AUTHOR(S): Sokolowski, Adam; Zielonka, Barbara; Piasecki, Andrzej; Wilk, Kazimiera A.; Burczyk, Bogdan  
 CORPORATE SOURCE: Institute of Organic and Polymer Technology, Wroclaw University of Technology, Wroclaw, 50-370, Pol.  
 SOURCE: Journal of Physical Chemistry B (1999), 103(26), 5512-5516  
 CODEN: JPCBFK; ISSN: 1089-5647  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 16 Jun 1999  
 AB A systematic study concerning adsorption and aggregation of chemodegradable, diastereomerically pure Na cis- and trans-(2-n-alkyl-1,3- dioxan-5-yl) sulfates (alkyl: n-C9H19 and n-C11H23) in the system consisting of n-heptane in contact with aqueous 0.2M NaCl at 31° was undertaken. The role of the 6-membered 1,3-dioxane ring was discussed in terms of comparison between studied surfactants and classical Na decyl and dodecyl sulfates. Surface parameters of compds. under study at the oil-H2O interface, i.e., surface tension reduction ( $\pi$ ), surface excess concentration ( $\Gamma$ ), surface area demand per mol. (A), critical micelle concentration (cmc), standard free energy of adsorption ( $\Delta G_{\text{oads}}$ ), and of micellization ( $\Delta G_{\text{ocmc}}$ ), show differences due to the adsorption and interfacial tensions of diastereomerically pure sodium cis- and trans-(alkyl dioxan-yl) sulfates at heptane-aqueous NaCl systems and to the

hydrophilic, i.e., sulfate group configuration at the C-5 atom of the 1,3-dioxane ring. The cmc,  $\Delta G_{\text{oads}}$ , and  $\Delta G_{\text{ocmc}}$  values are lower for the trans isomers than for the cis ones, whereas the effectiveness of surface tension reduction is nearly the same for both isomers. Addnl., the interfacial tensions of the studied acetal-type isomers were described for the heptane-aqueous NaCl systems containing Aerosol OT. According to findings the configuration of the  $-\text{OSO}_3\text{Na}$  polar group at the C-5 C atom of the 1,3-dioxane ring, i.e., equatorial in trans isomers and axial in cis isomers, involves diastereomeric differentiation in the aggregation abilities.

IT 186189-03-7 186189-04-8 186189-05-9

186189-06-0

RL: PEP (Physical, engineering or chemical process); PRP (Properties);

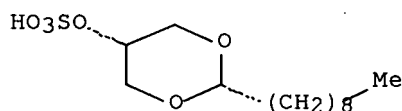
PROC (Process)

(adsorption and interfacial tensions of diastereomerically pure sodium cis- and trans-(alkyldioxan-yl) sulfates at heptane-water interface)

RN 186189-03-7 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.

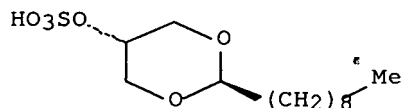


● Na

RN 186189-04-8 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.

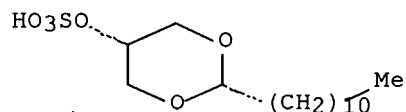


● Na

RN 186189-05-9 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.

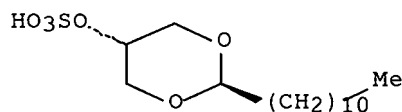


● Na

RN 186189-06-0 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, trans- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.



● Na

REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 17 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:304333 CAPLUS Full-text

DOCUMENT NUMBER: 130:311801

TITLE: Preparation of novel sodium sulfates of 1,3-dioxane  
derivativesINVENTOR(S): Piasecki, Andrzej; Burczyk, Bogdan; Sokolowski, Adam;  
Kotowska, Urszula

PATENT ASSIGNEE(S): Politechnika Wroclawska, Pol.

SOURCE: Pol., 4 pp.

CODEN: POXXA7

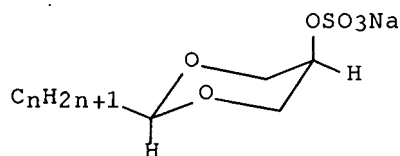
DOCUMENT TYPE: Patent

LANGUAGE: Polish

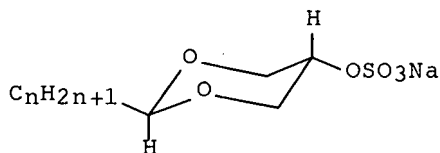
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

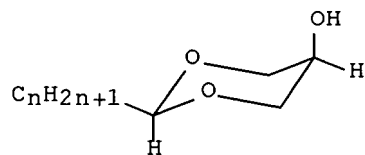
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
PL 175563	B1	19990129	PL 1994-306516	19941223 <--
PRIORITY APPLN. INFO.:			PL 1994-306516	19941223 <--
OTHER SOURCE(S):	MARPAT	130:311801		
ED Entered STN:		19 May 1999		
GI				



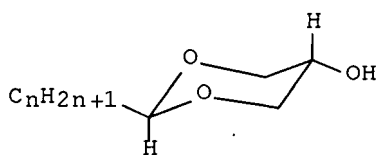
I



II



III



IV

AB The title compds. [I or II;  $n = 7-13$ ], potentially useful as surfactants (no data), were prepared by reacting cis-(or trans-)2-alkyl-5-hydroxy-1,3-dioxanes [III or IV] with  $\text{ClSO}_3\text{H}$  in  $\text{CCl}_4$  in the presence of pyridine followed by treatment of the intermediate with alc.- $\text{H}_2\text{O}$  solution of  $\text{NaOH}$ ,  $\text{Na}_2\text{CO}_3$  or  $\text{NaHCO}_3$  or by reacting III or IV with  $\text{C}_5\text{H}_5\text{N}\cdot\text{SO}_3$  in  $\text{CCl}_4$  followed by treatment of the intermediate with alc.-aqueous solution of  $\text{NaOH}$ ,  $\text{Na}_2\text{CO}_3$  or  $\text{NaHCO}_3$ .

IT **186189-03-7P 186189-06-0P 223537-63-1P**

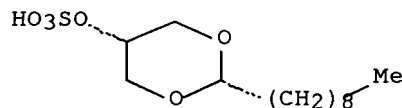
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(preparation of novel sodium sulfates of 1,3-dioxane derivs.)

RN 186189-03-7 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.

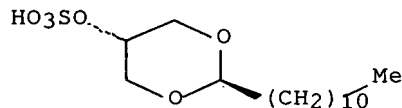


● Na

RN 186189-06-0 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, trans- (9CI) (CA INDEX NAME)

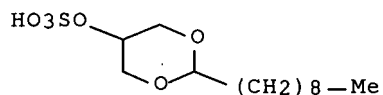
Relative stereochemistry.



● Na

RN 223537-63-1 CAPLUS.

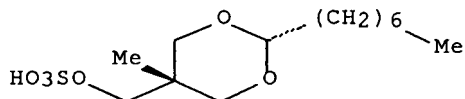
CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

L25 ANSWER 18 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1997:808663 CAPLUS Full-text  
 DOCUMENT NUMBER: 128:63186  
 TITLE: Chemical structure and surface activity. XXXII. Synthesis and surface properties of chemodegradable surfactants: sodium cis-[(2-n-alkyl-5-methyl-1,3-dioxan-5-yl)methyl] sulfates  
 AUTHOR(S): Piasecki, Andrzej; Burczyk, Bogdan; Sokolowski, Adam; Mayhew, Aleksandra; Wilk, Kazimiera A.  
 CORPORATE SOURCE: INSTITUTE OF ORGANIC AND POLYMER TECHNOLOGY, TECHNICAL UNIVERSITY OF WROCLAW, WROCLAW, 50-370, Pol.  
 SOURCE: Bulletin of the Polish Academy of Sciences, Chemistry (1997), 45(3), 329-337  
 CODEN: BPACEQ; ISSN: 0239-7285  
 PUBLISHER: Polish Academy of Sciences  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 31 Dec 1997  
 AB Sodium cis-[(2-n-alkyl-5-methyl-1,3-dioxan-5-yl)methyl] sulfates (alkyl: n-C7H15, n-C9H19 and n-C11H23) were synthesized by reaction of aliphatic aldehydes and 1,1,1-tris(hydroxymethyl)ethane, followed by sulfation with sulfur trioxide-pyridine complex and neutralization with NaHCO3 (NaOH) of the intermediate mixts. of cis- and trans-2-n-alkyl-5-hydroxymethyl-5-methyl-1,3-dioxanes or individual cis-isomers. Some of their surface properties at the aqueous solution-air interface were determined  
 IT **139888-69-0P 139888-70-3P 139888-72-5P**  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (synthesis and surface properties of chemodegradable sodium cis-[(2-n-alkyl-5-methyl-1,3-dioxan-5-yl)methyl] sulfate surfactants)  
 RN 139888-69-0 CAPLUS  
 CN 1,3-Dioxane-5-methanol, 2-heptyl-5-methyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.



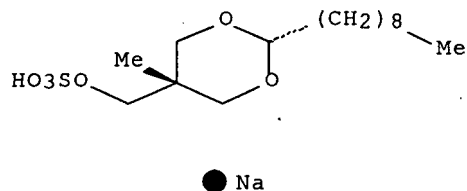
● Na



RN 139888-70-3 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-nonyl-, hydrogen sulfate, sodium salt,  
cis- (9CI) (CA INDEX NAME)

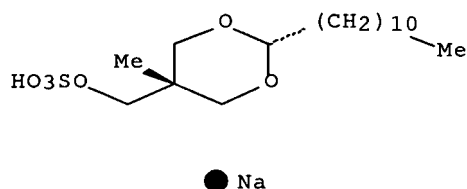
Relative stereochemistry.



RN 139888-72-5 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-undecyl-, hydrogen sulfate, sodium  
salt, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 19 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:569475 CAPLUS Full-text

DOCUMENT NUMBER: 127:308641

TITLE: Synthesis, surface properties, and hydrolysis of  
chemodegradable anionic surfactants:  
diastereomerically pure cis- and trans-2,5-  
disubstituted-1,3-dioxanes

AUTHOR(S): Piasecki, Andrzej; Sokolowski, Adam; Burczyk, Bogdan;  
Gancarz, Roman; Kotlewska, Urszula

CORPORATE SOURCE: Institute Organic Polymer Technology, Technical  
University Wroclaw, Wroclaw, 50-370, Pol.

SOURCE: Journal of Colloid and Interface Science (1997  
) , 192(1), 74-82

CODEN: JCISA5; ISSN: 0021-9797

PUBLISHER: Academic

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 06 Sep 1997

AB Two new groups of anionic surfactants, sodium cis- and trans-(2-n-undecyl-1,3-dioxan-5-yl)methyl sulfates and sodium cis- and trans-3-[(2-n-undecyl-1,3-dioxan-5-yl)oxy]propanesulfonates, were synthesized and investigated. Surface properties of these surfactants, i.e., surface excess concentration,  $\Gamma$ , surface area demand per mol.,  $A$ , effectiveness of surface tension reduction,  $\Pi$ , critical micelle concentration, CMC, and standard free energies of adsorption,  $\Delta G_{ads0}$ , and of micellization,  $\Delta G_{mic0}$ , were determined. The trans-isomers, in which the configuration of the polar group is equatorial, are more

surface active than the cis-isomers with axial configuration of the polar group at the C-5 carbon atom of the 1,3-dioxane ring. The surfactants under study undergo easy hydrolysis reaction in DCl/D2O solution with cleavage of the 1,3-dioxane ring to nonsurface active intermediates. The trans-isomers are hydrolyzed faster than the cis-isomers.

IT 197294-67-0P 197294-68-1P 197294-69-2P  
197294-70-5P

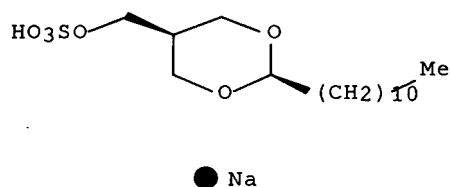
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(synthesis, surface properties, and hydrolysis of diastereomerically pure cis- and trans-2,5-disubstituted-1,3-dioxane anionic surfactantss)

RN 197294-67-0 CAPLUS

CN 1,3-Dioxane-5-methanol, 2-undecyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

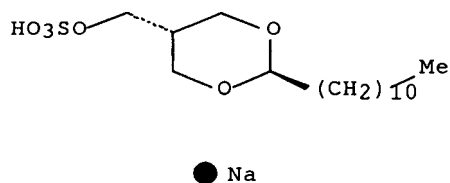
Relative stereochemistry.



RN 197294-68-1 CAPLUS

CN 1,3-Dioxane-5-methanol, 2-undecyl-, hydrogen sulfate, sodium salt, trans- (9CI) (CA INDEX NAME)

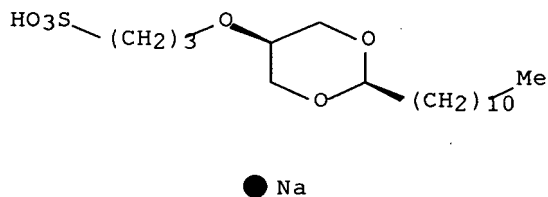
Relative stereochemistry.



RN 197294-69-2 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2-undecyl-1,3-dioxan-5-yl)oxy]-, sodium salt, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.

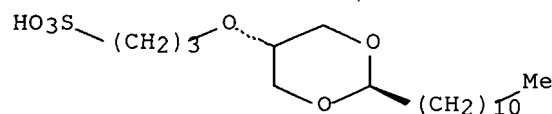


RN 197294-70-5 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2-undecyl-1,3-dioxan-5-yl)oxy]-, sodium salt,

trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.



● Na

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 20 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:335206 CAPLUS Full-text

DOCUMENT NUMBER: 127:34416

TITLE: Applications of Cyclic Sulfates of vic-Diols:  
Synthesis of Episulfides, Olefins, and Thio Sugars  
AUTHOR(S): Calvo-Flores, Francisco G.; Garcia-Mendoza, Pilar;  
Hernandez-Mateo, Fernando; Isac-Garcia, Joaquin;  
Santoyo-Gonzalez, Francisco

CORPORATE SOURCE: Instituto de Biotecnologia Facultad de Ciencias,  
Universidad de Granada, Granada, 18071, Spain

SOURCE: Journal of Organic Chemistry (1997), 62(12),  
3944-3961

CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 127:34416

ED Entered STN: 29 May 1997

AB A new efficient and expeditious one-pot synthesis of thiiranes and olefins from cyclic sulfates of vic-diols is described. Opening of cyclic sulfates with potassium thioacetate or potassium thiocyanate followed by treatment with sodium methoxide led to episulfides. Olefins were obtained when potassium selenocyanate was used as nucleophile, and the obtained monoesters were treated with sodium borohydride. This method was applied to acyclic polyols derived from chiral glycerin, 1,2- isopropylidenehexofuranoses with different substituents at C-3, and di-Me acetals derived from pentoses and hexoses. The methodol. is highly versatile, and its applicability has been demonstrated by the preparation of different 4- and 5-thio sugars by opening of the thiirane ring with sodium acetate or lithium aluminum hydride. Reduction with lithium aluminum hydride of the thiocyanate sulfate potassium salt obtained by the opening of cyclic sulfate with KSCN allowed the direct preparation of 5-deoxy-4-thio and 6-deoxy-5-thio sugars. Cyclic thio sugars with the sulfur atom in the ring are obtained by acidic hydrolysis of the 5-thiol derivs. of 1,2-O-isopropylidenehexofuranoses and 4-thiopentose di-Me acetals. Using this method, an efficient synthesis of 5-thio-L-fucose as well as the synthesis of 2,5-dideoxy-4-thiofuranose is described.

IT 190599-15-6P

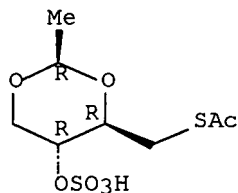
RL: SPN (Synthetic preparation); PREP (Preparation)  
(synthesis of episulfides and olefins and thio-sugars from cyclic sulfates of vic-diols)

RN 190599-15-6 CAPLUS

CN Ethanethioic acid, S-[[2-methyl-5-(sulfooxy)-1,3-dioxan-4-yl]methyl]

ester, potassium salt, [2R-(2 $\alpha$ ,4 $\alpha$ ,5 $\beta$ )]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



● K

REFERENCE COUNT: 136 THERE ARE 136 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 21 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:164886 CAPLUS Full-text

DOCUMENT NUMBER: 126:145606

TITLE: Synthesis, Surface Properties, and Hydrolysis of Chemodegradable Anionic Surfactants: Diastereomerically Pure Sodium cis- and trans-2-n-Alkyl-1,3-dioxan-5-yl Sulfates

AUTHOR(S): Piasecki, Andrzej; Sokołowski, Adam; Burczyk, Bogdan; Gancarz, Roman; Kotlewska, Urszula

CORPORATE SOURCE: Institute of Organic and Polymer Technology and Institute of Organic Chemistry Biochemistry and Biotechnology, Technical University of Wrocław, Wrocław, 50-370, Pol.

SOURCE: Langmuir (1997), 13(6), 1434-1439  
CODEN: LANGD5; ISSN: 0743-7463

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 11 Mar 1997

AB A systematic study concerning the synthesis, adsorption, micellization, and hydrolytic decomposition of new, chemodegradable and diastereomerically pure sodium cis- and trans-2-n-alkyl-1,3-dioxan-5-yl sulfates (alkyl: n-C<sub>7</sub>H<sub>15</sub>, n-C<sub>9</sub>H<sub>19</sub>, and n-C<sub>11</sub>H<sub>23</sub>) has been undertaken. Surface parameters of the compds. under study at the aqueous solution/air interface, i.e., surface tension reduction, surface excess concentration, surface area demand per mol., and standard free energy of adsorption and micellization, show differences both in the alkyl chain length and in the hydrophilic, i.e., sulfate, group configuration at the 1,3-dioxane ring. The cmc values are lower for the trans-isomers than for the cis-isomers, the  $\Delta G^{\circ}_{ads}$  and  $\Delta G^{\circ}_{cmc}$  values are lower for trans-isomers, and the effectiveness of surface tension reduction is higher for the cis-isomers than for the trans-isomers. The investigated compds. undergo an easy hydrolysis reaction of the acetal function, leading to starting aldehydes and sulfated glycerol. The trans-isomers are hydrolyzed much faster than cis-isomers, and no isomerization reaction of the type cis  $\rightarrow$  trans is observed during the hydrolysis process.

IT 186189-01-5P 186189-02-6P 186189-03-7P

186189-04-8P 186189-05-9P 186189-06-0P

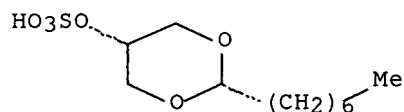
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(synthesis, surface properties, and hydrolysis of chemodegradable sodium cis- and trans-2-n-alkyl-1,3-dioxan-5-yl sulfate anionic surfactants)

RN 186189-01-5 CAPLUS

CN 1,3-Dioxan-5-ol, 2-heptyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.

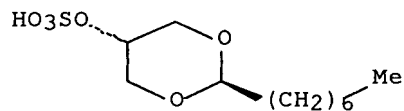


● Na

RN 186189-02-6 CAPLUS

CN 1,3-Dioxan-5-ol, 2-heptyl-, hydrogen sulfate, sodium salt, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.

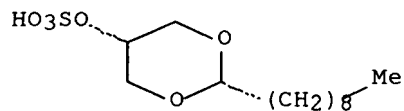


● Na

RN 186189-03-7 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.

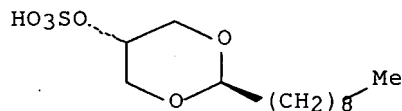


● Na

RN 186189-04-8 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.

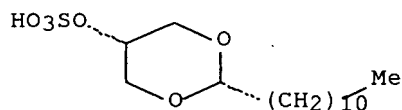


● Na

RN 186189-05-9 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, cis- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.

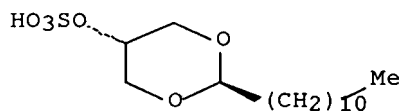


● Na

RN 186189-06-0 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, trans- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.



● Na

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 22 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:91830 CAPLUS Full-text

DOCUMENT NUMBER: 126:119361

TITLE: Chemical structure and activity. XXX. Synthesis and  
surface properties of chemodegradable anionic  
surfactants: sodium (2-n-alkyl-1,3-dioxan-5-  
yl)sulfatesAUTHOR(S): Piasecki, Andrzej; Sokolowski, Adam; Burczyk, Bogdan;  
Kotowska, UrszulaCORPORATE SOURCE: Inst. Organic Polymer Technology, Technical Univ.  
Wroclaw, Wroclaw, 50-370, Pol.SOURCE: Journal of the American Oil Chemists' Society (  
1997), 74(1), 33-37

CODEN: JAOCA7; ISSN: 0003-021X

PUBLISHER: AOCs Press  
DOCUMENT TYPE: Journal  
LANGUAGE: English

ED Entered STN: 08 Feb 1997

AB In the reaction of cis- and trans-2-n-alkyl-5-hydroxy-1,3-dioxane mixts. with SO<sub>3</sub>·pyridine complex, followed by neutralization with NaOH or Na<sub>2</sub>CO<sub>3</sub>, a new group of anionic surfactants, i.e., Na cis- and trans-(2-n-alkyl-1,3-dioxan-5-yl)sulfates were obtained. The hydrophobic intermediates used in the sulfation reaction were obtained in high yields from 4-component glycerol acetals by the process of transacetalization and selective crystallization of 1,3-dioxane derivs. The phys. data of the new compds. and some of their surface properties, such as critical micelle concentration, effectiveness of water surface tension reduction, standard free energies of adsorption and micellization, surface excess concentration, and the surface area demand per mol. were determined. The surface activity of the standard anionic surfactant Na dodecyl sulfate should be similar to the surface activity of Na (2-n-decyl-1,3-dioxan-5-yl)sulfate.

IT 186302-97-6P, 2-Octyl-1,3-dioxolan-5-yl sulfate sodium salt

186302-98-7P, 2-Decyl-1,3-dioxolan-5-yl sulfate sodium salt

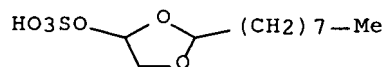
186302-99-8P, 2-Dodecyl-1,3-dioxolan-5-yl sulfatesodium salt

RL: SPN (Synthetic preparation); PREP (Preparation)

(synthesis and surface properties of chemodegradable anionic surfactants sodium (alkyldioxanyl)sulfates)

RN 186302-97-6 CAPLUS

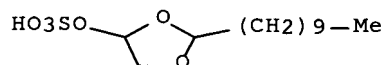
CN 1,3-Dioxolan-4-ol, 2-octyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 186302-98-7 CAPLUS

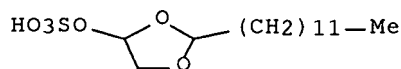
CN 1,3-Dioxolan-4-ol, 2-decyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 186302-99-8 CAPLUS

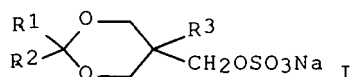
CN 1,3-Dioxolan-4-ol, 2-dodecyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

L25 ANSWER 23 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1995:673889 CAPLUS Full-text  
 DOCUMENT NUMBER: 123:59616  
 TITLE: Manufacturing surface-active sodium sulfate  
 derivatives of 2,5-di- and 2,2,5-trisubstituted  
 5-hydroxymethyl-1,3-dioxanes  
 INVENTOR(S): Piasecki, Andrzej; Burczyk, Bogdan  
 PATENT ASSIGNEE(S): Politechnika Wroclawska, Pol.  
 SOURCE: Pol., 5 pp.  
 CODEN: POXXA7  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Polish  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PL 162441	B1	19931231	PL 1990-283199	19900103 <--
PRIORITY APPLN. INFO.: OTHER SOURCE(S): MARPAT 123:59616			PL 1990-283199	19900103 <--
ED Entered STN: 14 Jul 1995				
GI				



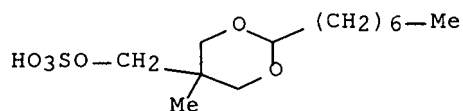
AB Title surfactants I (R1 = CaH2a+1, Ph, or CbH2b+1C6H4, a = 5-15, b = 1-12, R2 = H or CcH2c+1, c = 1-8, R1R2 = CdH2d, d = 5-12, R3 = Me or Et) are manufactured by reaction of the corresponding hydroxymethyldioxane with C5H5N and ClSO3H in a solvent such as CCl4 at 260-320K and dioxane derivative-ClSO3H-C5H5N mol ratio 1:(1-1.1):(2.1-2.5) or with a C5H5N-SO3 complex (II) in a solvent such as CCl4 at dioxane derivative-II mol ratio 1:(1-1.1) and 260-320K, evaporation of the reaction mixture, dissoln. of the evaporated product in an aqueous alc. solution of NaOH, NaHCO3, or Na2CO3, and evaporation of the solvent.

IT **143482-00-2P 143482-02-4P 164848-53-7P**  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (manufacturing surface-active sodium sulfate derivs. of 2,5-di- and 2,2,5-trisubstituted 5-hydroxymethyl-1,3-dioxanes)

RN 143482-00-2 CAPLUS

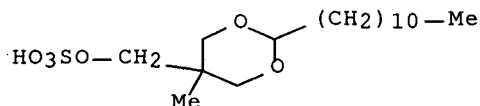
CN 1,3-Dioxane-5-methanol, 2-heptyl-5-methyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)





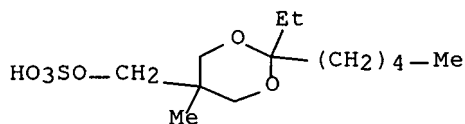
● Na

RN 143482-02-4 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-undecyl-, hydrogen sulfate, sodium salt  
(9CI) (CA INDEX NAME)

● Na

RN 164848-53-7 CAPLUS

CN 1,3-Dioxane-5-methanol, 2-ethyl-5-methyl-2-pentyl-, hydrogen sulfate,  
sodium salt (9CI) (CA INDEX NAME)

● Na

L25 ANSWER 24 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1994:194530 CAPLUS Full-text

DOCUMENT NUMBER: 120:194530

TITLE: Studies on synthesis and properties of surfactants  
with specific functions

AUTHOR(S): Yamamura, Shingo

CORPORATE SOURCE: Osaka Munic. Tech. Res. Inst., Osaka, 536, Japan

SOURCE: Yukagaku (1994), 43(1), 2-9

CODEN: YK GKAM; ISSN: 0513-398X

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

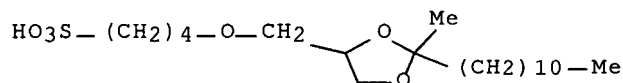
ED Entered STN: 16 Apr 1994

AB Novel surfactants with specific functions were synthesized from inexpensive, com. available bulk chems. by convenient synthetic methods. All were characterized by features such as chemical degradability, catalytic activity for a halide displacement reaction (Finkelstein reaction), ability to disperse lime soap, and complex with alkali metal cations. Applications for emulsion polymerization, surface-active properties, stability consts. of complexes with alkali metal ions, and solubilization of alkali metal picrates in organic solvents were studied.

IT 138487-16-8P 138487-17-9P 138487-18-0P

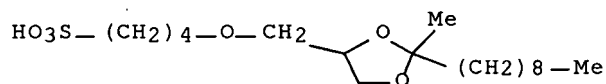
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and surfactant properties of)

RN 138487-16-8 CAPLUS

CN 1-Butanesulfonic acid, 4-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]-,  
sodium salt (9CI) (CA INDEX NAME)

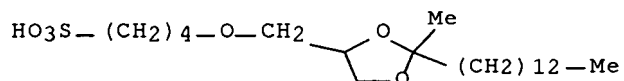
● Na

RN 138487-17-9 CAPLUS

CN 1-Butanesulfonic acid, 4-[(2-methyl-2-nonyl-1,3-dioxolan-4-yl)methoxy]-,  
sodium salt (9CI) (CA INDEX NAME)

● Na

RN 138487-18-0 CAPLUS

CN 1-Butanesulfonic acid, 4-[(2-methyl-2-tridecyl-1,3-dioxolan-4-yl)methoxy]-,  
sodium salt (9CI) (CA INDEX NAME)

● Na

L25 ANSWER 25 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1993:194040 CAPLUS Full-text

DOCUMENT NUMBER: 118:194040

TITLE: Synthesis and characterization of single-chain second  
generation cleavable surfactants

AUTHOR(S): Jaeger, David A.; Sayed, Yasmin M.

CORPORATE SOURCE: Dep. Chem., Univ. Wyoming, Laramie, WY, 82071, USA

SOURCE: Journal of Organic Chemistry (1993), 58(9),  
2619-27

CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 118:194040

ED Entered STN: 14 May 1993  
 AB Three series of single-chain, second generation cleavable surfactants based on trans-[8-(2,2-dialkyl-5-octyl-1,3-dioxolan-4-yl)octane-2-sulfate (alkyl = Me, Et, Pr, Bu) were prepared. They were characterized by critical micelle concentration, Krafft temperature, and dynamic laser light scattering measurements. Acid-catalyzed hydrolysis of the surfactants gives (threo-9,10-dihydroxyoctadecyl)trimethylammonium methanesulfonate, Na and triethanolammonium threo-9,10-dihydroxyoctadecane-1-sulfate, and a dialkyl ketone. Cleavage of these surfactants thus gives another surfactant, with a higher critical micelle concentration, and a H<sub>2</sub>O-soluble neutral compound. Triethanolammonium surfactants were .apprx.20 times more reactive than methanesulfonate surfactants.

IT **146575-93-1P 146575-95-3P 146575-97-5P**  
**146575-99-7P 146669-59-2P 146669-61-6P**  
**146669-62-7P 146689-45-4P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and surfactant properties of)

RN 146575-93-1 CAPLUS

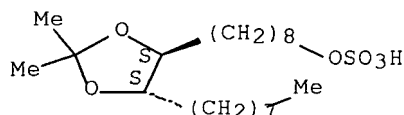
CN 1,3-Dioxolane-4-octanol, 2,2-dimethyl-5-octyl-, hydrogen sulfate, trans-, compd. with 2,2',2''-nitrilotris[ethanol] (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 146575-92-0

CMF C21 H42 O6 S

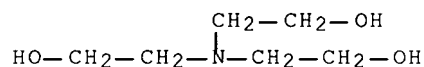
Relative stereochemistry.



CM 2

CRN 102-71-6

CMF C6 H15 N O3



RN 146575-95-3 CAPLUS

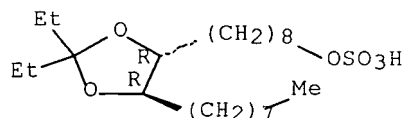
CN 1,3-Dioxolane-4-octanol, 2,2-diethyl-5-octyl-, hydrogen sulfate, trans-, compd. with 2,2',2''-nitrilotris[ethanol] (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 146575-94-2

CMF C23 H46 O6 S

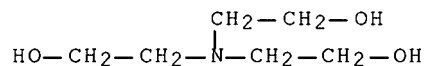
Relative stereochemistry.



CM 2

CRN 102-71-6

CMF C6 H15 N O3



RN 146575-97-5 CAPLUS

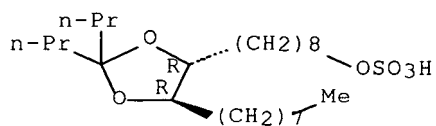
CN 1,3-Dioxolane-4-octanol, 5-octyl-2,2-dipropyl-, hydrogen sulfate, trans-, compd. with 2,2',2''-nitrilotris[ethanol] (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 146575-96-4

CMF C25 H50 O6 S

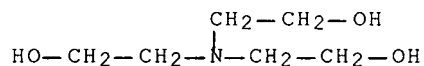
Relative stereochemistry.



CM 2

CRN 102-71-6

CMF C6 H15 N O3



RN 146575-99-7 CAPLUS

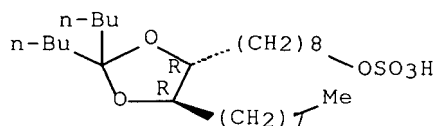
CN 1,3-Dioxolane-4-octanol, 2,2-dibutyl-5-octyl-, hydrogen sulfate, trans-, compd. with 2,2',2''-nitrilotris[ethanol] (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 146575-98-6

CMF C27 H54 O6 S

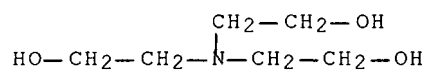
Relative stereochemistry.



CM 2

CRN 102-71-6

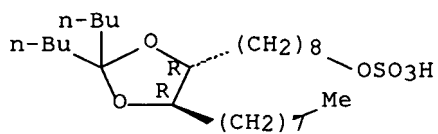
CMF C6 H15 N O3



RN 146669-59-2 CAPLUS

CN 1,3-Dioxolane-4-octanol, 2,2-dibutyl-5-octyl-, hydrogen sulfate, sodium salt, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.

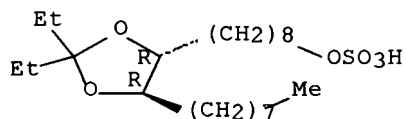


● Na

RN 146669-61-6 CAPLUS

CN 1,3-Dioxolane-4-octanol, 2,2-diethyl-5-octyl-, hydrogen sulfate, sodium salt, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.

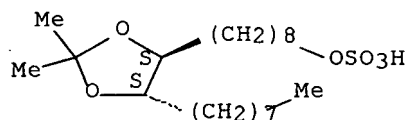


● Na

RN 146669-62-7 CAPLUS

CN 1,3-Dioxolane-4-octanol, 2,2-dimethyl-5-octyl-, hydrogen sulfate, sodium salt, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.

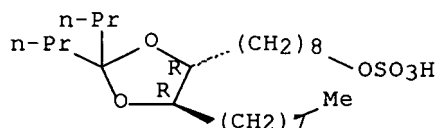


● Na

RN 146689-45-4 CAPLUS

CN 1,3-Dioxolane-4-octanol, 5-octyl-2,2-dipropyl-, hydrogen sulfate, sodium salt, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.



● Na

L25 ANSWER 26 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1992:533335 CAPLUS Full-text

DOCUMENT NUMBER: 117:133335

TITLE: Chemical structure and surface activity. XXV.

Synthesis and surface properties of chemodegradable anionic surfactants: sodium salts of sulfated 2-n-alkyl-5-hydroxymethyl-5-methyl-1,3-dioxanes

AUTHOR(S): Sokolowski, Adam; Piasecki, Andrzej; Burczyk, Bogdan

CORPORATE SOURCE: Inst. Org. Polym. Technol., Tech. Univ. Wroclaw, Wroclaw, 50-370, Pol.

SOURCE: Journal of the American Oil Chemists' Society ( 1992), 69(7), 633-8

CODEN: JAOCA7; ISSN: 0003-021X

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 04 Oct 1992

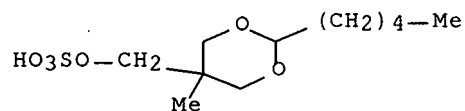
AB In acid-catalyzed reactions of C<sub>n</sub>-alkanecarboxaldehydes (n = 5, 7, 9, 11) with MeC(CH<sub>2</sub>OH)<sub>3</sub>, 2-(n-alkyl)-5-(hydroxymethyl)-5-methyl-1,3-dioxanes were obtained. The dioxanes were sulfated with SO<sub>3</sub>·pyridine complex in dry CCl<sub>4</sub> solution to obtain the title anionic surfactants. The surfactants could be readily hydrolyzed and oxidized to nonsurfactant compds. Phys. data and some surface properties, such as Krafft point, critical micelle concentration (CMC), surface tension of aqueous solution near CMC, and wetting and foaming properties, were determined. The surfactants exhibited aqueous solution properties similar to those of the well-known [R(OCH<sub>2</sub>CH<sub>2</sub>)<sub>m</sub>OSO<sub>3</sub>Na]. The presence of the 5-methyl-1,3-dioxane moiety in the mols. introduced hydrophobic character comparable to the effect of three oxyethylene groups or of two methylene groups of the alkyl chain in [R(OCH<sub>2</sub>CH<sub>2</sub>)<sub>m</sub>OSO<sub>3</sub>Na] with equal R value.

IT 143481-99-6P 143482-00-2P 143482-01-3P  
143482-02-4P

RL: SPN (Synthetic preparation); PREP (Preparation)

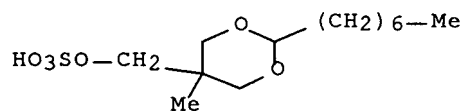
(preparation and surfactant properties of)

RN 143481-99-6 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-pentyl-, hydrogen sulfate, sodium salt  
(9CI) (CA INDEX NAME)

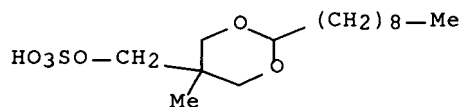
● Na

RN 143482-00-2 CAPLUS

CN 1,3-Dioxane-5-methanol, 2-heptyl-5-methyl-, hydrogen sulfate, sodium salt  
(9CI) (CA INDEX NAME)

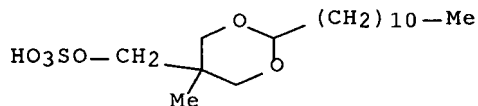
● Na

RN 143482-01-3 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-nonyl-, hydrogen sulfate, sodium salt  
(9CI) (CA INDEX NAME)

● Na

RN 143482-02-4 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-undecyl-, hydrogen sulfate, sodium salt  
(9CI) (CA INDEX NAME)

● Na

L25 ANSWER 27 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1992:215135 CAPLUS Full-text  
 DOCUMENT NUMBER: 116:215135  
 TITLE: Preparation of butadiene copolymers with low metal content  
 INVENTOR(S): Kasai, Kiyoshi; Sato, Hozumi; Takeda, Tokuji; Yamamura, Shingo; Nakamura, Masaki  
 PATENT ASSIGNEE(S): Japan Synthetic Rubber Co., Ltd., Japan; Osaka, City of  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03281602	A	19911212	JP 1990-81148	19900330 <--
PRIORITY APPLN. INFO.:			JP 1990-81148	19900330 <--

ED Entered STN: 31 May 1992

AB The title polymers having metal content  $\leq 200$  ppm, and useful in the electronic applications, are prepared by emulsion polymerization in the presence of acid-hydrolyzable surfactants bearing 1,3-dioxolane rings. Thus, emulsion polymerization of 65 parts butadiene with 35 parts acrylonitrile in the presence of 2 parts 2-methyl-2-undecyl-3-carboxy-5-methyl-1,3-dioxolane Na salt (I), and 0.01 part Na hydroxymethanesulfonate and treating the resulting polymer emulsions with 1% HCl gave polymers containing 15 ppm Na, vs 120 for polymers prepared without I.

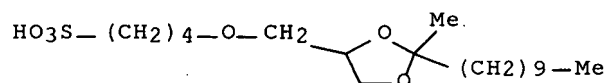
IT **141186-39-2**

RL: USES (Uses)

(surfactants, for manufacture of butadiene copolymers with low metal content)

RN 141186-39-2 CAPLUS

CN 1-Butanesulfonic acid, 4-[(2-decyl-2-methyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)

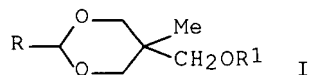


● Na

L25 ANSWER 28 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1992:151685 CAPLUS Full-text  
 DOCUMENT NUMBER: 116:151685  
 TITLE: Acetals and ethers. XXI. Preparation of diastereomerically pure sodium salts of sulfated 2-n-alkyl-5-hydroxymethyl-5-methyl-1,3-dioxanes  
 AUTHOR(S): Piasecki, Andrzej  
 CORPORATE SOURCE: Inst. Org. Polym. Technol., Tech. Univ. Wroclaw, Wroclaw, 50-370, Pol.  
 SOURCE: Synthetic Communications (1992), 22(3), 445-51



DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 116:151685  
 ED Entered STN: 17 Apr 1992  
 GI



AB cis-, trans- Or a mixture of cis- and trans-(hydroxymethyl)dioxanes I [R = 4-MeC6H4, Me(CH2)6, Me(CH2)8, Me(CH2)10, R1 = H] were sulfated with sulfur trioxide-pyridine complex in CCl4/pyridine to give I (R1 = SO3Na) as the pure cis- or trans-isomers.

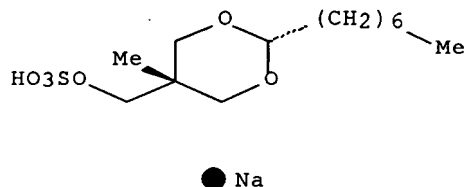
IT **139888-69-0P 139888-70-3P 139888-71-4P**  
**139888-72-5P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

RN 139888-69-0 CAPLUS

CN 1,3-Dioxane-5-methanol, 2-heptyl-5-methyl-, hydrogen sulfate, sodium salt,  
 cis- (9CI) (CA INDEX NAME)

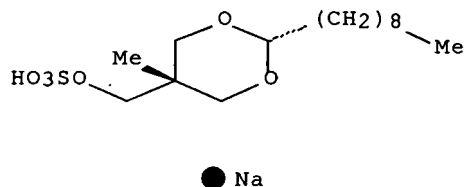
Relative stereochemistry.



RN 139888-70-3 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-nonyl-, hydrogen sulfate, sodium salt,  
 cis- (9CI) (CA INDEX NAME)

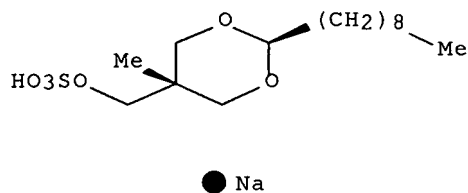
Relative stereochemistry.



RN 139888-71-4 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-nonyl-, hydrogen sulfate, sodium salt,  
 trans- (9CI) (CA INDEX NAME)

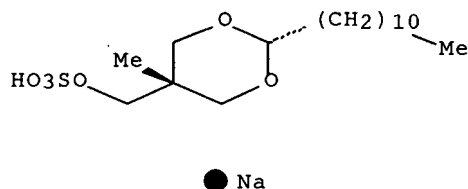
Relative stereochemistry.



RN 139888-72-5 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-undecyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.



L25 ANSWER 29 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1992:62074 CAPLUS Full-text

DOCUMENT NUMBER: 116:62074

TITLE: Synthesis and properties of destructible anionic surfactants with a 1,3-dioxolane ring and their use as emulsifier for emulsion polymerization

AUTHOR(S): Yamamura, Shingo; Nakamura, Masaki; Kasai, Kiyoshi; Sato, Hozumi; Takeda, Tokuji

CORPORATE SOURCE: Osaka Munic. Tech. Res. Inst., Osaka, 536, Japan

SOURCE: Yukagaku (1991), 40(11), 1002-6

CODEN: YK GKAM; ISSN: 0513-398X

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 21 Feb 1992

AB Degradable anionic surfactants with a 1,3-dioxolane ring were prepared and their surface properties determined. These surfactants contain a sulfonate group as the anionic hydrophile, and readily decompose under weakly acidic conditions. As surfactants for emulsion polymerization reactions, they are considerably superior to the conventional surfactants which give polymers containing higher contents of metals than the above surfactants.

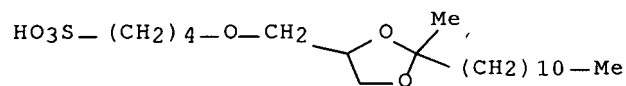
IT **138487-16-8P 138487-17-9P 138487-18-0P**

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(surfactants, preparation and surface properties of)

RN 138487-16-8 CAPLUS

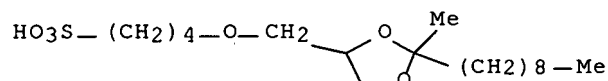
CN 1-Butanesulfonic acid, 4-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 138487-17-9 CAPLUS

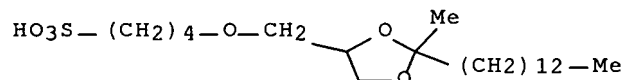
CN 1-Butanesulfonic acid, 4-[(2-methyl-2-nonyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 138487-18-0 CAPLUS

CN 1-Butanesulfonic acid, 4-[(2-methyl-2-tridecyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

L25 ANSWER 30 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1989:156549 CAPLUS Full-text

DOCUMENT NUMBER: 110:156549

TITLE: Preparation and characterization of glycerol-based cleavable surfactants and derived vesicles

AUTHOR(S): Jaeger, David A.; Jamrozik, Janusz; Golich, Timothy G.; Clennan, Malgorzata Wegrzyn; Mohebalian, Jamshid

CORPORATE SOURCE: Dep. Chem., Univ. Wyoming, Laramie, WY, 82071, USA

SOURCE: Journal of the American Chemical Society (1989), 111(8), 3001-6

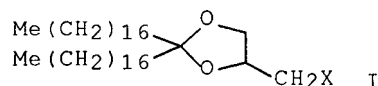
CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 30 Apr 1989

GI



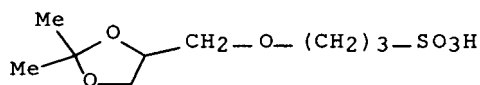
AB Vesicles of I [X = N+Me<sub>3</sub> MeSO<sub>3</sub><sup>-</sup> (II); X = N+Me<sub>3</sub> Br<sup>-</sup> (III); and X = O(CH<sub>2</sub>)<sub>3</sub>SO<sub>3</sub><sup>-</sup> Na<sup>+</sup> (IV)] were prepared by sonication and characterized by <sup>1</sup>H NMR line width narrowing, dynamic laser light scattering, DSC, and dye entrapment and leakage studies. In vesicular form, the hydrolytic stability of IV was greater than that of II/III, due to a combination of electrostatic effects resulting from the different substituents on the dioxolane ring. Neutral organic compds. could be readily isolated from vesicular solns. of IV after its hydrolysis. Thus, IV was appropriate for the application of vesicular media to preparative chemical I (X = N+Me<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>SO<sub>3</sub><sup>-</sup>) was prepared but did not readily disperse in water upon sonication.

IT **119296-62-7P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and hydrolysis of)

RN 119296-62-7 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2,2-dimethyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



L25 ANSWER 31 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1983:107200 CAPLUS Full-text

DOCUMENT NUMBER: 98:107200

TITLE: Cyanine dyes, new potent antitumor agents

AUTHOR(S): Minami, Isao; Kozai, Yoshio; Nomura, Hiroaki; Tashiro, Tazuko

CORPORATE SOURCE: Cent. Res. Div., Takeda Chem. Ind. Ltd., Osaka, 532, Japan

SOURCE: Chemical & Pharmaceutical Bulletin (1982), 30(9), 3106-20

CODEN: CPBTAL; ISSN: 0009-2363

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 98:107200

ED Entered STN: 12 May 1984

AB A number of cyanines with mono-, di- and tricyclic nuclei, merocyanines and oxonols were prepared and screened for antitumor activity against P388 leukemia and B16 melanoma. Among these compds., monomethin-, trimethin- and pentamethincyanines having naphthothiazole, naphthoxazole, and benzindole nuclei significantly prolonged the survival time of tumor-bearing mice. Replacement of the conjugated chain system between the 2 nuclei with a saturated aliphatic chain produced a marked decrease in the antitumor activity. Structure-activity relationships are discussed.

IT **84834-19-5P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and reaction of, with methlthionaphthothiazolium salt)

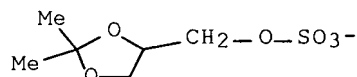
RN 84834-19-5 CAPLUS

CN Naphtho[2,1-d]thiazolium, 3-[(2,2-dimethyl-1,3-dioxolan-4-yl)methyl]-2-  
methyl-, (2,2-dimethyl-1,3-dioxolan-4-yl)methyl sulfate (9CI) (CA INDEX  
NAME)

CM 1

CRN 84834-18-4

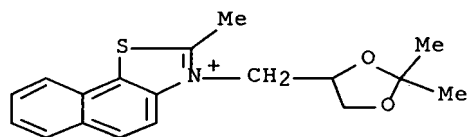
CMF C6 H11 O6 S



CM 2

CRN 84834-17-3

CMF C18 H20 N O2 S

IT **84846-66-2P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and reaction of, with methylthionaphthothiazolium salt)

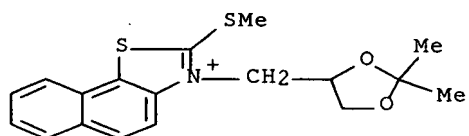
RN 84846-66-2 CAPLUS

CN Naphtho[2,1-d]thiazolium, 3-[(2,2-dimethyl-1,3-dioxolan-4-yl)methyl]-2-  
(methylthio)-, (2,2-dimethyl-1,3-dioxolan-4-yl)methyl sulfate (9CI) (CA  
INDEX NAME)

CM 1

CRN 84846-65-1

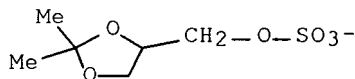
CMF C18 H20 N O2 S2



CM 2

CRN 84834-18-4

CMF C6 H11 O6 S



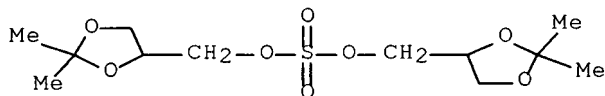
IT 84833-76-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of, with naphthothiazoles)

RN 84833-76-1 CAPLUS

CN 1,3-Dioxolane-4-methanol, 2,2-dimethyl-, sulfate (2:1) (9CI) (CA INDEX NAME)



L25 ANSWER 32 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1976:407606 CAPLUS Full-text

DOCUMENT NUMBER: 85:7606

TITLE: Dioxolane derivatives having surfactant properties

INVENTOR(S): McCoy, David R.

PATENT ASSIGNEE(S): Texaco Inc., USA

SOURCE: U.S., 6 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3948953	A	19760406	US 1969-847729	19690805 <--
US 3909460	A	19750930	US 1973-387426	19730810 <--
PRIORITY APPLN. INFO.:			US 1969-847729	A2 19690805 <--

ED Entered STN: 12 May 1984

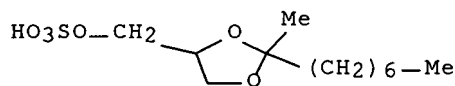
AB The reaction of glycerol [56-81-5] with C7-15 aliphatic ketones gave 2,2-dialkyl-4-hydroxymethyl-1,3-dioxolanes which were ethoxylated, sulfated (with 1:1 molar ClSO<sub>3</sub>H-Et<sub>2</sub>O [59263-80-8]), or phosphorylated with POCl<sub>3</sub> to prepare surfactants with higher detergency than com. ethoxylated alcs. or sulfates of ethoxylated alcs. Thus, a mixture of glycerol 137, p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H 5, benzene 500, and C10-15 aliphatic ketones 260 parts was heated 65 hr to prepare a mixture of 2,2-dialkyl-4-hydroxymethyl-1,3-dioxolanes which were mixed with 1% KOH and treated with ethylene oxide [75-21-8] (5.3 moles/mole dioxolane) to prepare a surfactant.

IT 59263-78-4 59263-79-5

RL: USES (Uses)  
(detergents)

RN 59263-78-4 CAPLUS

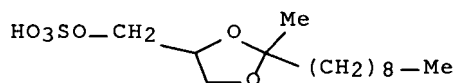
CN 1,3-Dioxolane-4-methanol, 2-heptyl-2-methyl-, hydrogen sulfate, ammonium salt (9CI) (CA INDEX NAME)



● NH<sub>3</sub>

RN 59263-79-5 CAPLUS

CN 1,3-Dioxolane-4-methanol, 2-methyl-2-nonyl-, hydrogen sulfate, ammonium salt (9CI) (CA INDEX NAME)



● NH<sub>3</sub>

L25 ANSWER 33 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1975:607840 CAPLUS Full-text

DOCUMENT NUMBER: 83:207840

TITLE: Detergent compositions containing dioxolanes as surfactants

INVENTOR(S): McCoy, David R.

PATENT ASSIGNEE(S): Texaco Inc., USA

SOURCE: U.S., 6 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

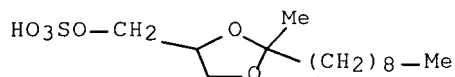
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3909460	A	19750930	US 1973-387426	19730810 <--
US 3948953	A	19760406	US 1969-847729	19690805 <--
PRIORITY APPLN. INFO.:			US 1969-847729	A2 19690805 <--

ED Entered STN: 12 May 1984

AB 2-Methyl-4-methylol-2-nonyl-1,3-dioxolane [6542-98-9] and similar 2,2-dialkyl 4-methylol-1,3-dioxolanes, prepared from glycerol [56-81-5] and C13-15 dialkyl ketones, were ethoxylated or sulfated to prepare surfactants with good solubility in water, good detergency in laundering, and light color. Thus, glycerol was condensed with C10-15 dialkyl ketones in benzene containing p-MeC6H4SO3H to prepare 2,2-dialkyl-4-methylol-1,3-dioxolanes which reacted with 5.2 moles ethylene oxide [75-21-8] to prepare a surfactant.

IT 57413-41-9

RL: USES (Uses)  
(detergents)  
RN 57413-41-9 CAPLUS  
CN 1,3-Dioxolane-4-methanol, 2-methyl-2-nonyl-, hydrogen sulfate (9CI) (CA  
INDEX NAME)



L25 ANSWER 34 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1972:564761 CAPLUS Full-text  
DOCUMENT NUMBER: 77:164761  
TITLE: ω-(4-Phenyl-1-piperazinyl)alkane-1,2-diols  
INVENTOR(S): Hardie, Waldo Richard; Tankersley, Donald L.  
PATENT ASSIGNEE(S): Cutter Laboratories Inc.  
SOURCE: Ger. Offen., 16 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2210752	A	19720921	DE 1972-2210752	19720306 <--
US 3770743	A	19731106	US 1971-122144	19710308 <--
FR 2128713	A5	19721020	FR 1972-7923	19720307 <--
FR 2128713	B1	19750801		
GB 1336547	A	19731107	GB 1972-10550	19720307 <--
CA 1003837	A1	19770118	CA 1972-136438	19720307 <--
			US 1971-122144	A 19710308 <--

## PRIORITY APPLN. INFO.:

ED Entered STN: 12 May 1984

GI For diagram(s), see printed CA Issue.

AB The title compds. [I, n = 3 (II), 4, 5] and (or) their salts with HCl or citric acid, useful as analgesics, spasmolytics, blood pressure lowering, and alpha adrenergic blocking drugs, were prepared by hydrolysis of the dioxolanes (III, R = Me, Et; R1 = Me, Ph). Thus, HOCH2CH(OH)(CH2)3OH was refluxed with Me2CO to give 3-(2,2-di-methyl-1,3-dioxolan-4-yl)propanol, which was esterified with MeSO2Cl to give 3-(2,2-dimethyl-1,3-dioxolan-4-yl)propyl methanesulfonate. This was heated with 1-phenylpiperazine to give III (R = R1 = Me), which was refluxed with concentrated HCl in EtOH to give II.2HCl.

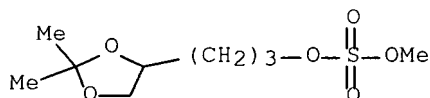
IT **37939-45-0P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 37939-45-0 CAPLUS

CN Sulfuric acid, 3-(2,2-dimethyl-1,3-dioxolan-4-yl)propyl methyl ester (9CI)  
(CA INDEX NAME)





L25 ANSWER 35 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1932:18189 CAPLUS Full-text

DOCUMENT NUMBER: 26:18189

ORIGINAL REFERENCE NO.: 26:1900f-i

TITLE: Model experiments on the theory of alcoholic fermentation. VI. Oxidation of mono- and diacetoneglucose and of monoacetoneglucose-3-sulfuric acid

AUTHOR(S): Ohle, Heinz; Couticos, Georg; Gonzalez, Francisco Garcia y

SOURCE: Berichte der Deutschen Chemischen Gesellschaft [Abteilung] B: Abhandlungen (1931), 64B, 2810-3

CODEN: BDCBAD; ISSN: 0365-9488

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

ED Entered STN: 16 Dec 2001

AB It had been found that 3,6-anhydroacetoneglucose with  $\text{KMnO}_4$  in initially neutral solution gives considerable acetone-d-xyluronic acid (I). Acetoneglucose (II) behaves in the same way and acetoneglucose-3-sulfuric acid (III) gives acetone-xyluronic-3-sulfuric acid (IV). The introduction of the  $\text{H}_2\text{SO}_4$  residue changes the behavior of II in the sense that 1 point of attack by the oxidizing agent, viz., the 3-HO group, is closed, but simultaneously the vulnerability of IV, as compared with the mother substance, is increased; with 2 and 6 atoms O, only 15 and 35%, resp., of the K salt of IV were obtained. In diacetoneglucose, the 3-HO group is the favored point of attack and only a little I is formed, as was indicated by the oxidation curve and confirmed by preparative expts. Optically active substances are still obtained with 12 atoms O; this indicates that the  $\text{Me}_2\text{C}$  group is involved in the oxidation. The oxidation curve of diacetoneglucose-3-sulfuric acid (V) showed no great difference from the mother substance and no preparative expts. were run on this compound. In the oxidation of these glucose derivs., then, there is neither a formation of stable hemiacetals nor a saccharinic acid rearrangement. K salt of I (28% from II and 2 N  $\text{KMnO}_4$  (4.5 atoms O) at room temperature  $[\alpha]_{\text{D}20} -52.56^\circ$  (water). K salt of V, prisms with 2.5  $\text{H}_2\text{O}$  from absolute EtOH-benzine,  $[\alpha]_{\text{D}20} -13.17^\circ$  (water, c 4.792), loses 2 mols.  $\text{H}_2\text{O}$  in vacuo over  $\text{P}_2\text{O}_5$  at  $100^\circ$  and then decomps.  $185-95^\circ$ . III is obtained by crystallizing the pyridine salt of V from alc. or decomposing the K salt with N  $\text{H}_2\text{SO}_4$  at room temperature; its K salt shows  $[\alpha]_{\text{D}20} -14.56^\circ$  (water, c 7.013). Di-K salt of IV, needles with 2  $\text{H}_2\text{O}$ ,  $[\alpha]_{\text{D}20}$  (anhydrous)  $-36.94^\circ$ , also obtained from the K salt of I with pyridinium-N-sulfonic acid in pyridine.

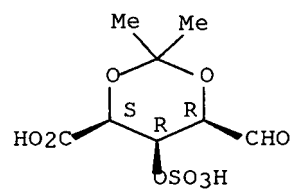
IT **879278-94-1P**, Xyluronic-3-sulfuric acid, acetone-, dipotassium salt **879278-96-3P**, Xyluronic-3-sulfuric acid, acetone-

RL: PREP (Preparation)  
(preparation of)

RN 879278-94-1 CAPLUS

CN Xyluronic-3-sulfuric acid, acetone-, dipotassium salt (3CI) (CA INDEX NAME)

Relative stereochemistry.

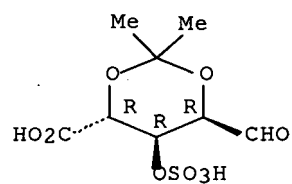


●2 K

RN 879278-96-3 CAPLUS

CN Xyluronic-3-sulfuric acid, acetone- (3CI) (CA INDEX NAME)

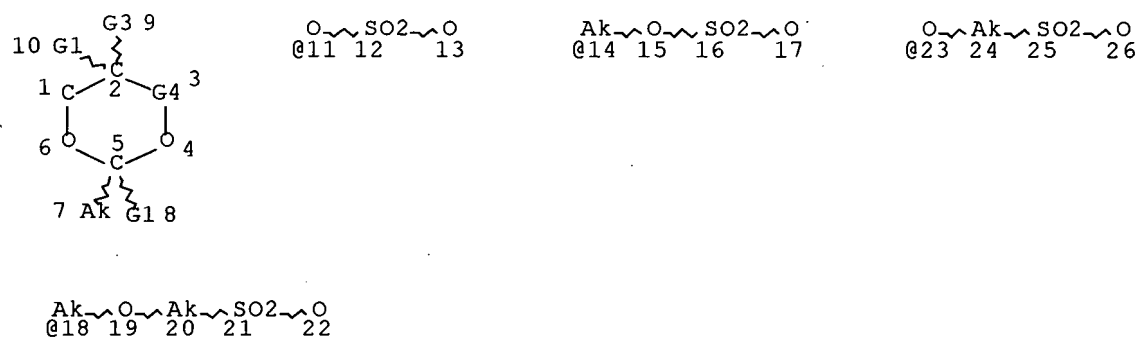
Relative stereochemistry.



FILE 'HOME' ENTERED AT 10:13:08 ON 06 MAR 2007

## SEARCH HISTORY

=> d stat que l10; d his nofile  
L7 STR



VAR G1=H/ME/ET/N-PR/N-BU  
VAR G3=11/14/18/23  
REP G4=(0-2) C  
NODE ATTRIBUTES:  
CONNECT IS E1 RC AT 7  
CONNECT IS E2 RC AT 14  
CONNECT IS E2 RC AT 18  
CONNECT IS E2 RC AT 20  
CONNECT IS E2 RC AT 24  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 26

STEREO ATTRIBUTES: NONE  
L10 134 SEA FILE=REGISTRY SSS FUL L7

100.0% PROCESSED 18268 ITERATIONS  
SEARCH TIME: 00.00.01

134 ANSWERS

(FILE 'HOME' ENTERED AT 09:59:38 ON 06 MAR 2007)

FILE 'CAPLUS' ENTERED AT 09:59:57 ON 06 MAR 2007  
E US2005-516419/APPS

L1 1 SEA ABB=ON US2005-516419/AP  
D SCAN  
SEL RN

FILE 'REGISTRY' ENTERED AT 10:00:21 ON 06 MAR 2007

L2 8 SEA ABB=ON (1120-71-4/BI OR 138705-84-7/BI OR 308818-10-2/BI  
OR 308818-11-3/BI OR 308818-13-5/BI OR 525-66-6/BI OR 56-81-5/B  
I OR 593-08-8/BI)  
D SCAN  
L3 STR  
L4 5 SEA SSS SAM L3

## D SCAN

FILE 'CAPLUS' ENTERED AT 10:04:54 ON 06 MAR 2007

L5 4 SEA ABB=ON L4  
 L6 0 SEA ABB=ON L5 AND L1

FILE 'REGISTRY' ENTERED AT 10:05:17 ON 06 MAR 2007

L7 STR L3  
 L8 5 SEA SSS SAM L7  
 L9 18268 SEA SSS FUL L7 EXTEND  
 L10 134 SEA SSS FUL L7  
 SAVE TEMP L10 GIT419FULL/A

FILE 'CAPLUS' ENTERED AT 10:08:19 ON 06 MAR 2007

L11 81 SEA ABB=ON MALLET C?/AU  
 L12 2447 SEA ABB=ON RUSSELL R?/AU  
 L13 20 SEA ABB=ON YARDLEY K?/AU  
 L14 0 SEA ABB=ON L11 AND L12 AND L13  
 L15 47 SEA ABB=ON L10  
 L16 1 SEA ABB=ON (L11 OR L12 OR L13) AND L15  
 D SCAN TI  
 D IBIB  
 L17 40 SEA ABB=ON RUSSEL R?/AU  
 L18 1 SEA ABB=ON L11 AND (L12 OR L17) AND L13  
 L19 36 SEA ABB=ON L15 AND (PY<2003 OR PRY<2003 OR AY<2003)  
 L20 1 SEA ABB=ON L19 AND L16

FILE 'REGISTRY' ENTERED AT 10:11:09 ON 06 MAR 2007

D STAT QUE L10

FILE 'CAPLUS' ENTERED AT 10:11:24 ON 06 MAR 2007

D QUE NOS L16  
 L21 125966 SEA ABB=ON SURFACTANTS/CT  
 L22 3 SEA ABB=ON (L11 OR L12 OR L17 OR L13) AND L21  
 D QUE L22  
 L23 3 SEA ABB=ON (L16 OR L22)  
 L24 3 SEA ABB=ON L23 OR (L23 AND L15)  
 D IBIB ED ABS HITSTR 1-3

FILE 'CAPLUS' ENTERED AT 10:12:43 ON 06 MAR 2007

D QUE NOS L19  
 L25 35 SEA ABB=ON L19 NOT L24  
 D IBIB ED ABS HITSTR 1-35

FILE 'HOME' ENTERED AT 10:13:08 ON 06 MAR 2007

D STAT QUE L10

=&gt;